



Annual Compliance Report – Year 5

16 December 2023 to 15 December 2024 – EPBC 2015/7513
Residential Development, Ipswich, Queensland
Ripley Town Center No. 1 Pty Ltd
6 March 2025

Job No: 12202 E

Document control

Document: Annual Compliance Report EPBC 2015/7513 (16 December 2023 to 15 December 2024) – Year 5, prepared by Saunders Havill Group for Ripley Town Center No 1. Pty Ltd.

Document Issue

Issue	Date	Prepared By	Checked By
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Prepared by

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1. Introduction

Saunders Havill Group (SHG) were engaged by Ripley Town Center No. 1 Pty Ltd to prepare the fifth Annual Compliance Report (ACR) for the Residential Development project located in Ripley, Ipswich, Queensland granted under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (ref. EPBC 2015/7513), as specifically required by Condition 15 of the approval granted on 16 October 2017 (refer **Appendix A**). The approval was granted by the former Australian Government Department of the Environment and Energy, now the Department of Climate Change, Energy, the Environment and Water ('the Department').

Contextually, the project area covers approximately 128 hectares (ha) and is located approximately 8.5 kilometres (km) south-east of Ipswich City and is located within the Ipswich City Council Local Government Area (refer to **Figure 1 and Figure 2**).

This report delivers the fifth annual overview of the project's progression contributing towards the vision, '*as a Smart Community and a sustainable, liveable and prosperous development ... intrinsically linked to the provision of employment and amenities,*' and compliance with the EPBC Act approval conditions. Notable events and the project's progress during the reporting period are detailed in **Section 3**. The assessment of compliance with the approval conditions is presented in **Section 6**.

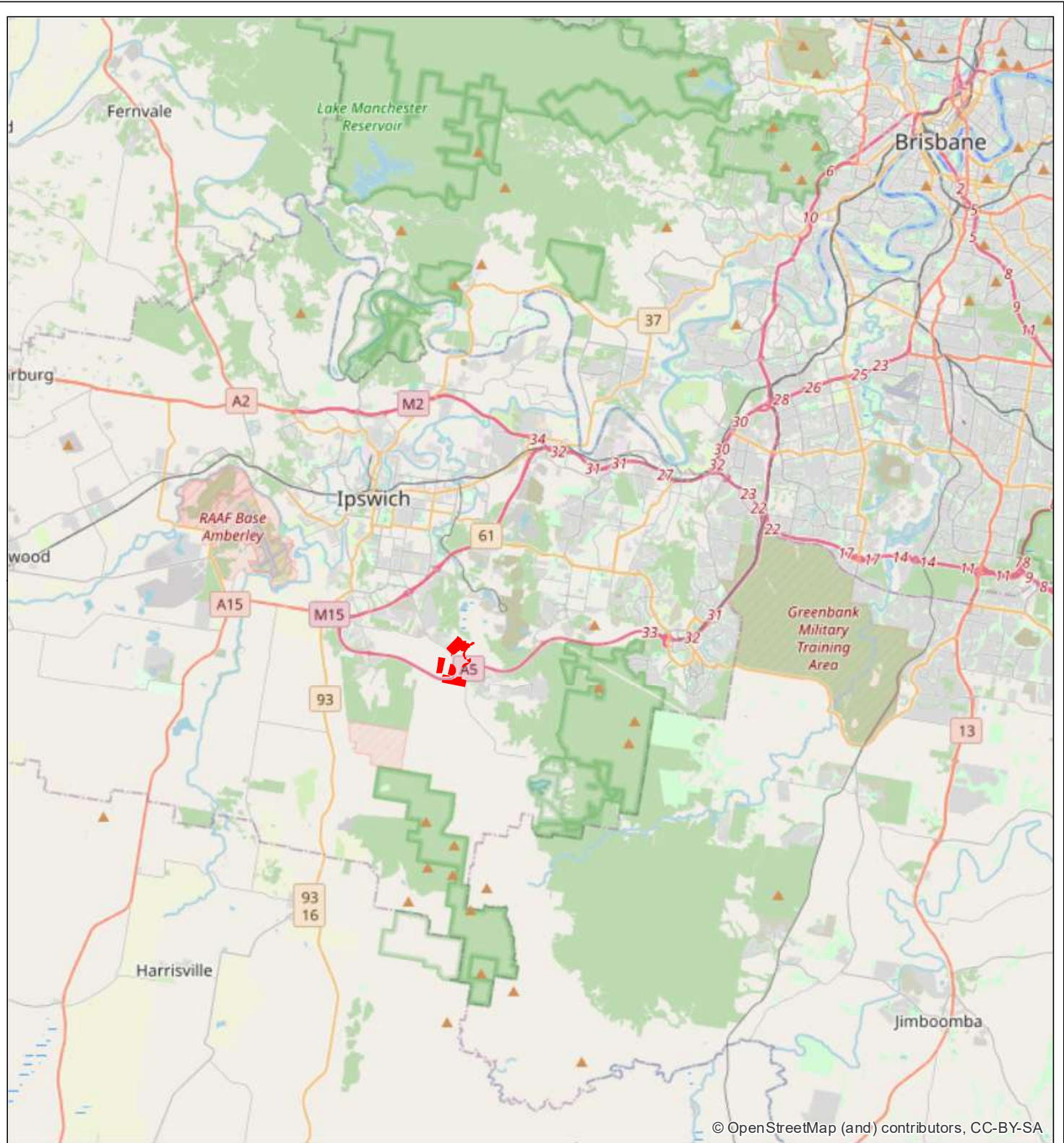
1.1. Transfer of approval

The balance of the landholdings subject to EPBC 2015/7513 was sold to Ripley Town Center No. 1 Pty Ltd in May 2024. Ripley Town Center No. 1 as the Buyer of the remaining landholdings under EPBC 2015/7513 are contractually bound to facilitate the transfer of the EPBC Act approval from the current joint approval holders BCove 4 Pty Ltd and Ripley Town Holdings Pty Ltd (RTH) to the Buyer and as such a request for a change of approval holder was submitted to the Department in November 2024. SHG were engaged by Ripley Town Center No. 1 Pty Ltd to prepare this report as the transferee of the EPBC Act approval (EPBC 2015/7513) which is in the process of being transferred from current joint approval holders BCove 4 Pty Ltd and Ripley Town Holdings Pty Ltd (RTH).

It is noted that under the sales agreement and proposed approval holder entity change, the landholdings subject to EPBC 2015/7513 are managed by multiple proponents. The project landholdings are comprised of the following land parcels; Lot 2 on SP326583, Lot 1014 on SP322432, Lot 20 on SP337706, Part of Lots 1 and 2 on SP337684 and Lot 5 on SP291374. As noted in previous Annual Compliance Reports, the residential estate name for the project under the original approval holders was 'ECCO Ripley' with the estates named 'Lacebark' and 'Amory' included under the approval. Ecco Ripley is located in the subdivided land parcels north of Ripley Road, Lacebark is located over Lot 20 on SP337706 and Amory is located over Part of Lots 1 and 2 on SP337684. Refer to **Plan 1**.

1.2. Approval summary

Department reference	EPBC 2015/7513
Approval holder	Transferee – Ripley Town Center No 1. Pty Ltd (ACN: 677647013) Transferor – BCove 4 Pty Ltd (ACN: 123 079 836) and Ripley Town Holdings Pty Ltd (ACN: 112 588 217)
Approval date	16 October 2017
Expiry date of approval	31 July 2047
Approved action	To develop the residential development at Ripley Valley, Ipswich, Queensland.
Controlling provision	Approved - listed threatened species and communities (sections 18 & 18A)
Reporting period	16 December 2023 to 15 December 2024
Address	Ripley Road, Ripley, Queensland
Local government area	Ipswich City Council



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Legend

- Qld DCDB
- Referral area

Figure 1

Site Context

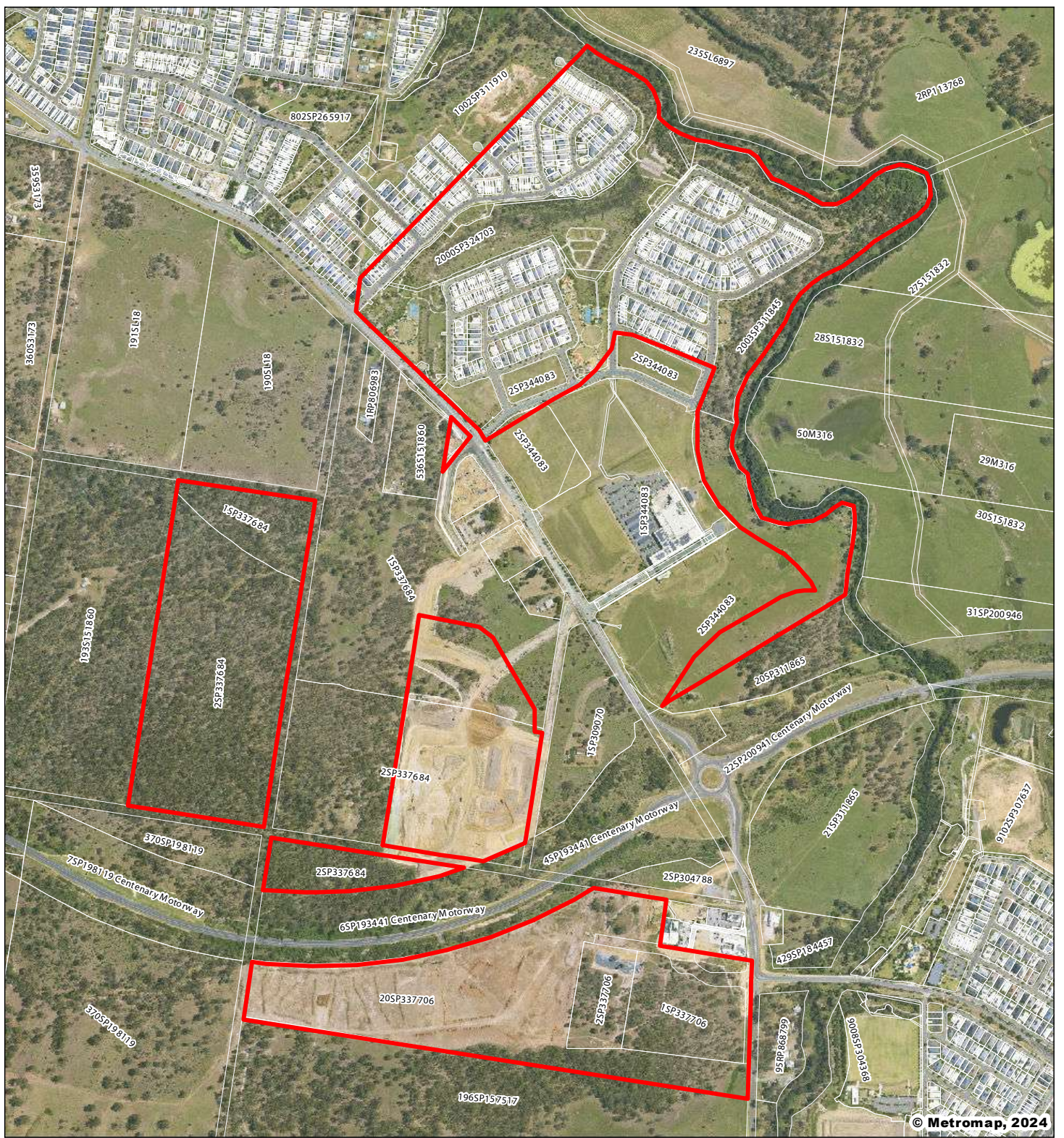
Ripley Town Center
No. 1 Pty Ltd

File ref. 12202 E Figure 1 ACR5 Site Context A
Date 3/03/2025
Project Ripley Project



Scale (A4): 1:250,000 [GDA 1994 MGA Z56]

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Legend

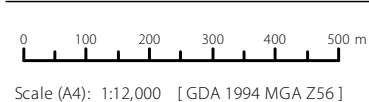
- Qld DCDB
- Referral area

Figure 2

Site Aerial

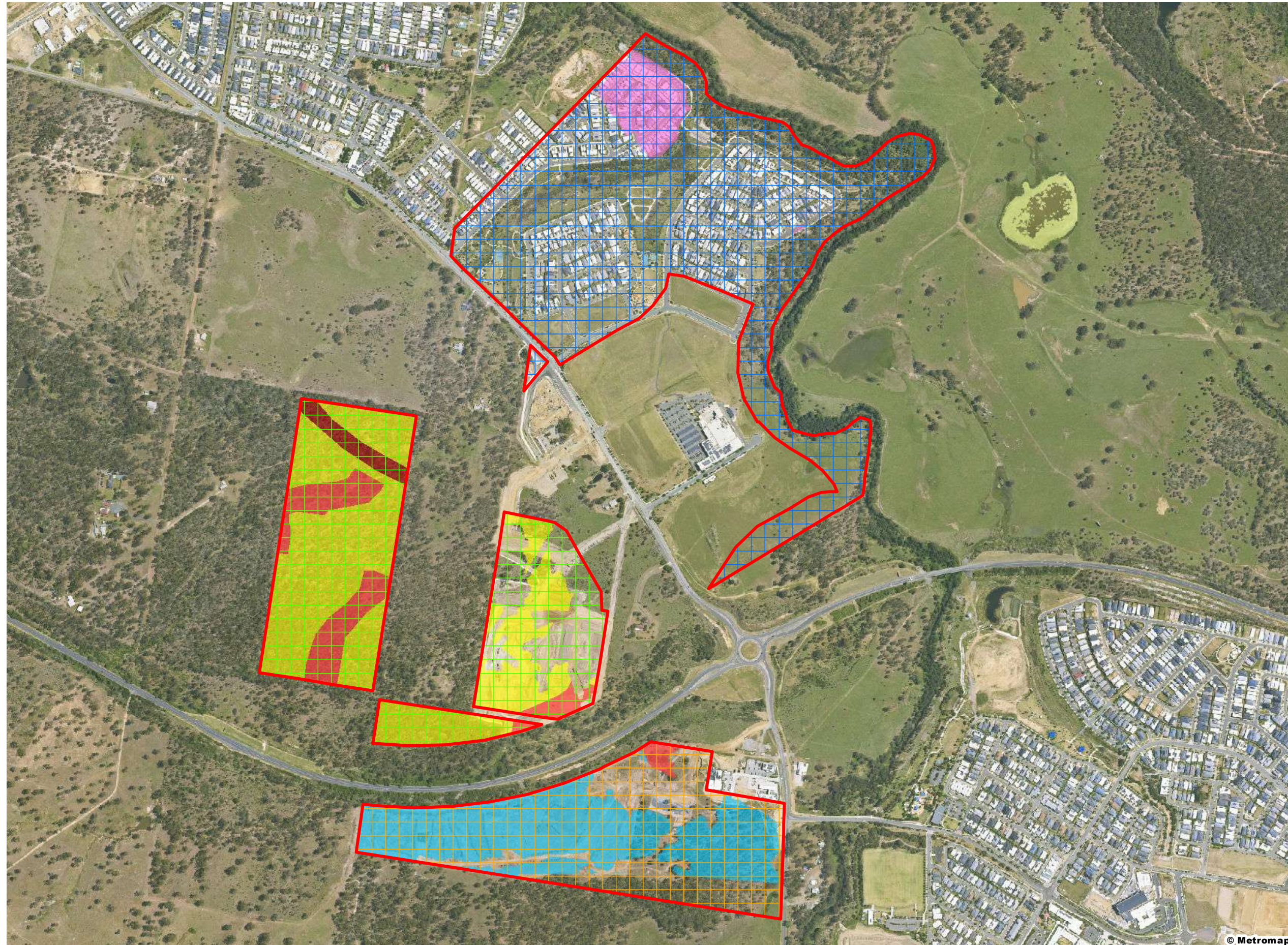
Ripley Town Center
No. 1 Pty Ltd

File ref. 12202 E Figure 2 ACR5 Site Aerial A
Date 6/03/2025
Project ECCO Ripley



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1. Residential Estates Summary

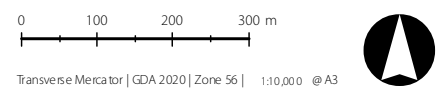


Notes:
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- Legend**
- Referral Area
 - Amory Estate
 - Ecco Ripley Estate
 - Lacebark Estate
- ACR assessment zones**
- Future Rail Corridor
 - Zone 2 - Vegetated area to clear
 - Zone 3 vegetated area to clear
 - Zone 4 vegetated area to clear
 - Approval Variation areas to clear

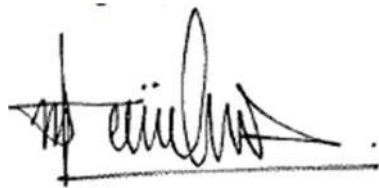
Issue	Date	Description	Drawn	Checked
A	6/03/2025	Preliminary	TF	AD



Address / RPD/Ripley
 6/03/2025 | 12202 E 01 ACR5 Land Holdings Summary A

2. Declaration of accuracy

In making this declaration, I am aware that sections 490 and 491 of the EPBC Act make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.



Signed

Full name Murray Saunders

Position Director

Organisation Saunders Havill Group (ABN 24 144 972 949)

Date 6 March 2025

3. Description of activities

The project is located in the suburb of Ripley which seeks to provide residences for approximately 6,250 people in one of the fastest growing industry areas in Australia. Under the South East Queensland Regional Plan (ShapingSEQ), the State Government has identified Ripley as a major regional activity centre which provides a vibrant new town centre that services the Ripley Valley master-planned community with diverse living opportunities and retail, commercial and recreational facilities, focused on a public transport hub, main street and town centre parklands.

Key activities completed during the reporting period are summarised as:

- Estate area works:
 - Vegetation clearing and earthworks within Zones 3 and 4 and approval variation areas.
- Offset area works:
 - Monitoring of Koala occurrence, health, extent of occupation and Koala-predator interactions.
 - Annual weed assessment and weed management.
 - Annual predator and threat assessment and management.
 - Low-moderate controlled burn.

3.1. Ecco Ripley

The action commenced on the 16 December 2019 with the commencement of works for the Ecco Ripley development including clearing of vegetation exceeding two or more hectares as stipulated within the approval. Within Ecco Ripley, rehabilitation works within the adjoining 50 m waterway buffer to Bundamba Creek, extending from Stage 9 (southern interface with town centre holdings) to Stage 15 (western boundary with adjacent Defence Housing Australia landholdings), proceeded prior to the commencement of the approved action (*i.e.*, 16 December 2019). The Bundamba Creek East rehabilitation area has undergone full rehabilitation and establishment period and was accepted as entirely as “off-maintenance” by Ipswich City Council in 2023.

Estate area works are considered complete within Ecco Ripley. Community activities have included the following:

- Community Activities:
 - Native and European bee program – urban pollination
 - Little Day Out – annual children’s arts and music festival
 - Regular under 5s creative workshops
 - Weekly community busking
 - Community awards program – You Little Ripper

- Weekly community based workshops – Minka Place (yoga, meditation, dance, youth)
- School holiday workshops
- Regular food trucks
- Weekly Justice of the Peace services
- Weekly seniors' coffee catchups
- Annual Pet Expo
- Community based pop ups – Hearing, swim safety etc.
- Co-op sustainable store – EcoCentric
- Newsagent and restaurant openings
- Weekly Ecco Ripley parkrun
- Directional signage installed across retail precinct
- Landscaping upgrades across retail precinct

Ecco Ripley continues to demonstrate commitment to holistic sustainable design through green initiatives. This has been recognised through the recertification of its 5 Star Green Star Communities rating following its original certification in 2015.

3.2. Amory and Lacebark

During the 2023-2024 reporting period, site activities including vegetation clearing and earthworks were progressed within the landholdings associated with Lacebark and Amory (*i.e.*, Lots 20 on SP337706 and part of Lots 1 and 2 on SP337684).

Vegetation clearing impacts and protocols are described in the following Section.

4. Management of Impacts

4.1. Direct Impacts

Approvals relating to impacts on ecological matters were collated from Commonwealth, State and Local governments for the project and several overarching environmental management plans specific to each clearing site.

Clearing of 18.1 ha of critical Koala habitat occurred during the reporting period for a total of 18.9 ha, demonstrated on **Plan 2** and summarised in below. Clearing has been completed within zones 2, 3 and 4 and approval variation areas to clear.

Table 1: Development details

Existing cleared area on-site (i.e., open paddocks)	26.7 ha
Total vegetated area on-site	63.5 ha
Total approved clearing of critical koala habitat	46.3 ha
Total cleared critical koala habitat to date	18.9 ha

4.2. Vegetation clearing protocol

Prior to the commencement of any clearing, approval and pre-clearance documents are collated and distributed to the site contractor and relevant sub-contractors in an Environmental Pre-Start Package. Pre-start packages generally includes the following documents:

- EPBC Act Koala Management Plan (KMP), prepared by SHG dated November 2018;
- Wildlife Protection and Management Plan (WPMP), prepared by the engaged Fauna Spotter Catcher;
- Wildlife and Habitat Impact Mitigation Plan (WHIMP), prepared by the engaged Fauna Spotter Catcher;
- Site specific Vegetation Clearing and Fauna Management Plan (VCFMP), typically prepared by SHG;
- Site specific arborist reports (if required), prepared by qualified consultants; and
- Site specific Erosion and Sediment control plans (ESCP), prepared by qualified consultants.

The environmental plans provided stipulate environmental management requirements pertinent to each stage of construction and measures for vegetation management (clearing and protection), protection of MNES fauna (Koala) and other native wildlife, maintenance of safe wildlife movement opportunities, fauna habitat rehabilitation, threatened flora management and pest management.

As part of managing the work areas of the project, a second supporting document was developed: Ecco Ripley — Environmental Pre-Start Checklist that covers the Pre-start Packages with similar versions prepared for Amory and Lacebark (refer **Figure 3**). This checklist is integral to ensuring construction proceeds within the

demarcated limits, suitable fencing is installed across the work area and the necessary checks and management procedures for threatened fauna are completed prior to the clearing of any vegetation.

A pre-start package was prepared and distributed followed by a pre-start meeting for Amory Stages 1-2 on 30 July 2024 and Lacebark (all stages) on 21 October 2024. Clearing commenced for each stage after completion of the pre-start meeting.

Example photos of tree protection fencing installed prior to clearing events for Amory and Lacebark are provided in **Photo sets 1 and 2**.



Photo set 1: Tree protection fencing for pre-start July 2024 (Amory).



Photo set 2: Tree protection fencing for pre-start October 2024 (Lacebark).

4.2.1 Pre- and Post-clearing Reporting

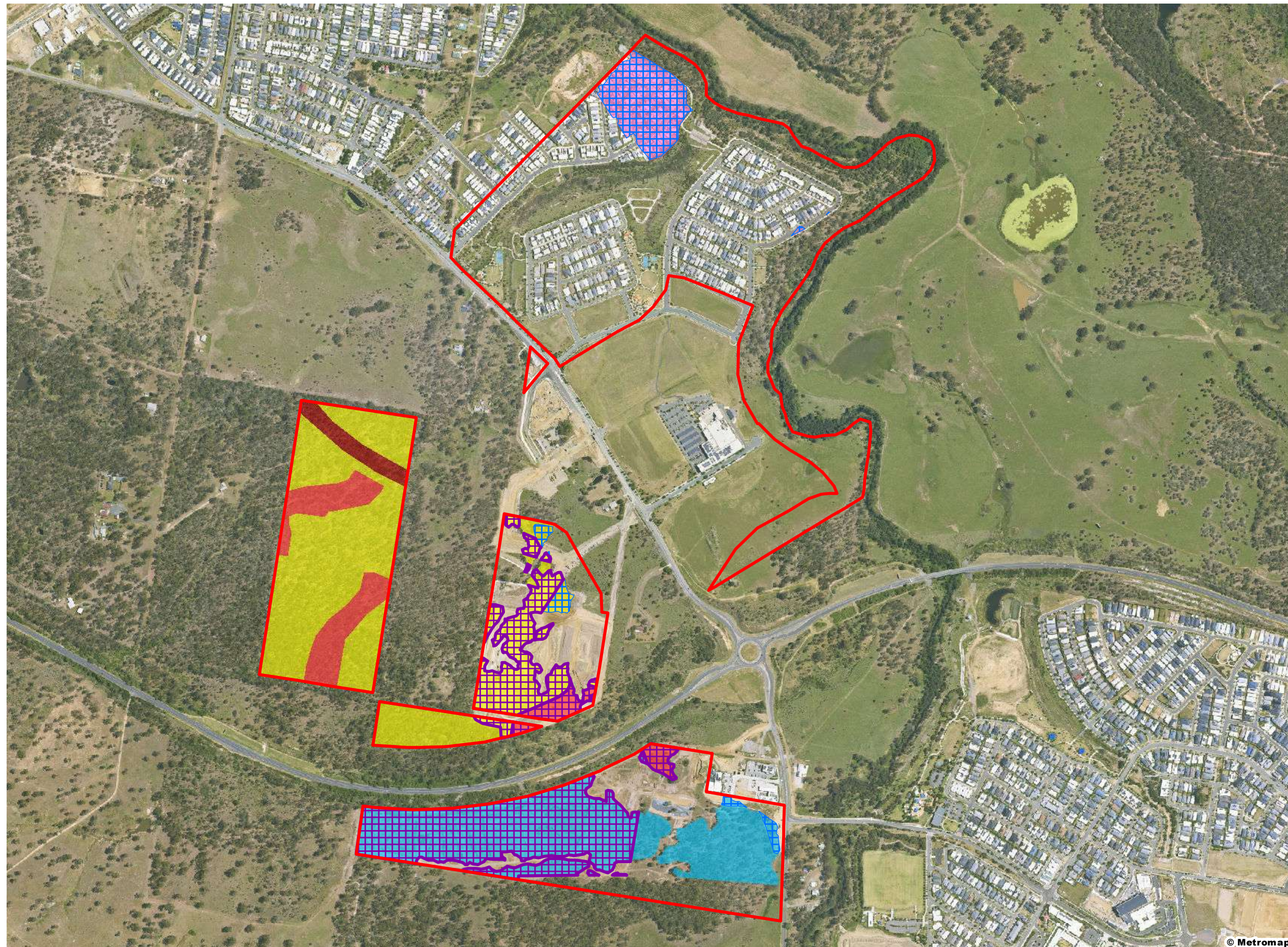
For clearing completed to date, pre- and post-clearing surveys and reporting were undertaken by a Department of Environment, Science and Innovation (DESI) qualified Fauna Spotter Catcher across project areas to mitigate the potential for adverse impacts. The Fauna Spotter Catcher duties include an inspection of demarcated works boundaries pre-clearance survey of fauna habitat and presence of fauna, supervision of clearing activities and relocation of habitat features, and ensuring clear paths for fauna to reach safe havens

were provided or fauna dispersed as per standard protocols. Two (2) Koalas were reported during clearing works for Amory, one of which was identified outside of the clearing works. The second Koala individual identified within the clearing extent self-relocated away from the clearing works without injury.

The engaged Fauna Spotter Catchers for the project include Queensland Fauna Consultancy (QFC) for Amory and Australia Wide Environmental Consultants (AWEC) for Lacebark. Relevant pre-clearance and post-services reports are presented as **Appendix B and C**. As part of pre-clearance surveys for Lacebark, a Koala drone survey was completed by AWEC in which one (1) Koala individual was identified within the clearing extent prior to clearing. The Koala was left to self-relocate prior to clearing.

No injury to Koala has occurred as a result of clearing or construction activities.

2. Impact Review

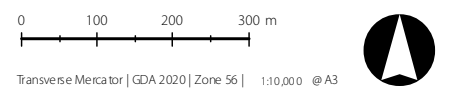


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- Legend**
- Referral Area
 - Koala Habitat clearing completed in previous ACR periods [0.8 ha]
 - Year 5 ACR Koala habitat clearing areas [18.1 ha]
 - Future Rail Corridor
 - Zone 2 - Vegetated area to clear
 - Zone 3 vegetated area to clear
 - Zone 4 vegetated area to clear
 - Approval Variation areas to clear

Issue	Date	Description	Drawn	Checked
A	6/03/2025	Preliminary	TF	AD



Address / RPD Ripley
 6/03/2025 | 12202 E 02 ACR5 Impact Review A

ECCO Ripley Project
Environmental Pre-Start Checklist



Project Area:		Date:			
Contractor:					
Date work is to start:					
Date work is to cease:		Compliance			
#	Control Measure	Yes	No	N/A	Details
1	Has a Vegetation Clearing Fauna Management Plan (VCFMP) been prepared as per the requirements of the EPBC Act Approval?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1
2	Has a Koala Management Plan (KMP) been prepared as per the requirements of the EPBC Act approval?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 2
3	Has a Wildlife Protection and Management Plan (WPMP) and Wildlife and Habitat Impact Mitigation Plan (WHIMP) been prepared as per the requirements of the KMP?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 3
4	Has a Protected Plants flora survey been undertaken for the clearing impact area and exemption / permit to clear obtained from DES?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 4
5	Have copies of the approved EPBC Act VMP, WPMP, WHIMP and KMP been issued to all site contractors and sub-contractors and made available in the site construction office?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Copies of EPBC Act VMP, WPMP, WHIMP and KMP with this Environmental Pre-start Checklist
6	Have clearing extents been marked out and fenced (delineating areas to be cleared vs retained)? (N.B. Demarcation fencing is to be installed before the time of the official pre-start).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 5 for Environmental Coordinator inspection & Sign Off.
7	Have demarcation extents been signed off by the Environmental Coordinator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 5 for Environmental Coordinator inspection & Sign Off.
8	Has a qualified AQF Level 5 Arborist been appointed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 6 for appointed Arborist details and Audit Report
9	Has Tree Protection Fencing been installed along the perimeter of riparian corridors, boundaries of vegetation clearing and any trees to be retained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 5 for Environmental Coordinator inspection & Sign Off.
10	Has a NCA licensed Fauna Spotter Catcher been appointed to be present during all clearing activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 7 for appointed Fauna Spotter Catcher details.
11	Has the appointed Fauna Spotter Catcher completed pre-clearance surveys and reports? (N.B. these must include EPBC Act approval requirements and specifications as per the KMP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 3 for Fauna Spotter Catcher WPMP and WHIMP
12	If the appointed Fauna Spotter Catcher identified any sensitive areas of consideration in clearing methods, please provide a summary.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 3 for Fauna Spotter Catcher WPMP and WHIMP

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ECCO Ripley Project
Environmental Pre-Start Checklist



	(N.B. fauna exclusion fencing must be erected around construction areas where necessary)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13	Has an Erosion and Sediment Control Plan (ESCP certified by a RPEQ or accredited CPESC Professional) been prepared and approved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 8 for ESCP.
14	Have all contractors, subcontractors and associated personnel been instructed on environmental procedures and controls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On site pre-start meeting was held with all signatory parties (or their representatives) on 12 December 2019.
15	Has a pre-start been completed with all relevant parties?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On site pre-start meeting was held with all signatory parties (or their representatives) on 12 December 2019.
Additional requirements or works within riparian corridors and / or waterways					
16	Will works involve clearing within a Fisheries mapped waterway for waterway barrier works? If so, are works compliant with applicable accepted development requirements and / or permits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
17	Will works involve clearing within a watercourse defined under the Water Act 2000? If so, are works compliant with applicable exemptions and / or permits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

NOTE: if the answer to any question above is NO then the clearing activity will not proceed.

Compliance Awareness

Signing below demonstrates acknowledgement of the environmental pre-start procedures and requirements listed in the checklist above and associated attachments.

Name	Company	Position	Signature	Date
		Client Representative		
		Site Contractor		
		Clearing Contractor		
		Fauna Spotter Catcher		
		Project Arborist		
		Project Engineer		
		Environmental Coordinator		

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Figure 3: Environmental Pre-start Checklist template example

4.3. Long-term Impacts

Each new resident of the Amory Estate will be provided with ‘Living with Koalas Lifestyle Guidelines’ (the Guidelines) which is accessible at the Amory website at <https://amoryripley.com.au/builders-portal/>. Guidelines were previously distributed to new residents of the now sold out Ecco Ripley estate.

The Guidelines have been designed to help promote a range of ecological sustainable living principles. The Guidelines will be used to directly educate and raise awareness of a large audience towards the management of the Bundamba Creek Corridor and Koala habitat values. Topics included within the Guidelines include:

- Creating a Koala friendly backyard through minimising light pollution between 6pm and 6am, ensuring swimming pools are secured (or an escape is provided for Koalas) and discouraging Koalas from entering yards through careful plant selection.
- Encouraging appropriate management of domestic animals through securing them within yards, walking dogs on-leash through the estate and Bundamba Creek corridor and accessing the off-leash dog park for off-leash enrichment. The location of the off-leash dog park, Pebbles Park, is shown via a map within the Ecco Ripley Guidelines.
- Driving with care at night, being aware of wildlife and Koala signage and abiding the speed limit.
- Key contacts for reporting sick, injured or orphaned Koalas.

5. Bundamba Creek Rehabilitation

5.1. Approval background

As part of the EPBC Act approval process and separate to the offset requirements, it was determined that the open space along Bundamba Creek would be created and rehabilitated to improve ecological, connectivity and Koala habitat values. The purpose of the rehabilitation was to increase available Koala habitat and improve connectivity for Koalas along Bundamba Creek. The Bundamba Creek rehabilitation area has been dedicated to Ipswich City Council for conservation purposes now that the rehabilitation works are considered established.

As part of the *Site Based Rehabilitation and Weed Management Plan, Bundamba Creek, Ripley*, dated January 2018 prepared by SHG, works within the corridor have included enhancing ecological, connectivity and Koala habitat values through the removal of weed infestations, stabilisation of erosion prone areas, promotion of native plant regeneration and planting of Koala habitat trees. Fourteen (14) monitoring reports were issued detailing the progress of rehabilitation. The purpose of these reports was to provide ongoing monitoring of the rehabilitation works undertaken within the 50 m waterway buffer to Bundamba Creek within the development site (refer Ipswich City Council Approval 5786/2017/PDAEE).

The process for completing the dedication includes the following steps:

1. At the completion of works a thorough on-site inspection is completed by Ipswich City Council and once satisfactory the area is accepted as “on-maintenance”.
2. Once the works are considered completed the created allotment can be registered with the Queensland Government titles office and dedicated to Ipswich City Council.
3. After 24 months, if the completed works continue to satisfy Ipswich City Council during the regular inspections, the works are considered “off-maintenance”.

Rehabilitation works within the 50 m waterway buffer to Bundamba Creek extending from Ecco Ripley Stage 9 (southern interface with town centre holdings) to Stage 15 (western boundary with adjacent Defence Housing Australia landholdings) proceeded prior to the commencement of the approved action (*i.e.*, 16 December 2019) and occurred during the second and third year reporting periods. The scope of works for the waterway buffer included weed management, rehabilitation, revegetation, site stability and erosion management. Combined these actions increase available Koala habitat and improve connectivity for Koalas along Bundamba Creek.

5.2. Off-maintenance certification

Rehabilitation works, including weed management, tube stock planting, assisted regeneration, and on-maintenance monitoring, have been completed within the Bundamba Creek corridor. These areas were accepted as “off-maintenance” by Ipswich City Council on 13 July 2023. As such, the Bundamba Creek corridor

has been wholly maintained under the ownership of Ipswich City Council since July 2023. Refer to the previous ACR (Year 4) for evidence of certification.

Council inspected the eastern portion of rehabilitation works referred to as Bundamba Creek East (Rehabilitation Monitoring Points (RMP) 1-3) 11 February 2023 and agreed that this area had achieved the “off maintenance” criteria. Rehabilitation monitoring has also been completed for Bundamba Creek West (Stage 13-15) associated with rehabilitation monitoring point 4 and achieved “off-maintenance” status as of 13 July 2023. The following photos present the changes in the RMPs from the first inspection to the final off-maintenance inspection.

RMP 1 – Works Complete

Inspection 1

Inspection 12



RMP 1 – Works Complete

Inspection 1



Inspection 12



RMP 2 – Works Complete

Inspection 1



Inspection 12



RMP 2 – Works Complete

Inspection 1



Inspection 12



RMP 3 – Works Complete

Inspection 1



Inspection 12



RMP 3 – Works Complete

Inspection 1



Inspection 12



RMP 4 – Works Complete

Inspection 1



Inspection 6



RMP 4 – Works Complete

Inspection 1



Inspection 6



6. Koala Crossing Offset Area

6.1. Offset area context

Prior to commencement of the action, an offset area was required to be legally secured, providing a minimum of 65.69 ha of Koala habitat in accordance with Condition 6 of the EPBC Act Approval. The offset area is legally described as Lots 86 and 89 on RP892014 and is referred to as ‘Koala Crossing’. The total area of these lots is 184.83 ha, of which 65.69 ha has been secured for offsets associated with the EPBC 2015/7513.

The offset area was secured through a Voluntary Declaration under the *Vegetation Management Act 1999* (Qld) by Queensland Trust for Nature on 7 June 2018. The Department was notified on 2 August 2018 that an offset for impacts on the Koala had been secured.

The Offset Area Management Plan which details the progressive works to occur throughout the offset area was lodged with the confirmation of the legally secured offset. Condition 10 of the approval outlines the need for the approval holder to prepare and implement a monitoring program for the life of the approval.

To achieve the offset requirements, the Offset Area Management Plan proposes to enhance the level of protection afforded to existing Koala habitat through exclusion of land management practices that are incompatible to achieving a net gain in Koala habitat quality.

The offset milestones have been summarised in the table below with this being the seventh year of the offset area. The Year 7 Offset Area Management Report is provided at **Appendix D**.

Table 2: Offset Milestones

Milestone	Due Date	Completion
Approval of EPBC 2015/7513	-	16 October 2017
Legally Secured Offset Site	Prior to commencement of action	7 June 2018
Year 1 – Baseline	December 2018	October 2018
Year 2 – Intensive Review	December 2019	November 2019
Commencement of Action	-	16 December 2019
Year 3 – Rehabilitation & Monitoring	December 2020	January 2021
Year 4 – Rehabilitation & Monitoring	December 2021	February 2022
Year 5 – Rehabilitation & Monitoring	December 2022	January 2023
Year 6 – Rehabilitation & Monitoring	December 2024	January 2024
Year 7 – Rehabilitation & Monitoring	December 2024	February 2025

6.2. Year 7 offset summary

A summary of the offset actions achieved during the fifth annual compliance reporting period is detailed below. Refer to **Appendix D** for the Year 7 Offset Area Management Report prepared by QTFN.

- The Year 7 review monitored Koala scats over the reporting period. These were found in similar locations to past scat occurrences, indicating an active population of Koalas in the site. A Koala was observed on site during August 2024 during camera trap surveys.
- Annual weed assessments were completed to compare results from baseline surveys. Permanently marked transects are surveyed in accordance with Nelder *et al* 2015 in a 50 x 10 m transect and established photo points to monitor progress. Across the site *Lantana camara* has decreased to 89% occupancy at 26 of 28 transects from 93% the last reporting period.
- QTF's 2020-2025 Weed Strategy which will focus on continuing to reduce *L. camara* as well as testing and deploying methods for treating the emerging weed problem on-site – *Lantana montividiensis*. Three permanent survey sites are located within the offset area. Although each site remains under the baseline threshold (baseline +10%), the mean of all three sites has exhibited stable lantana coverage. This area is due for follow up treatment which will address emergence.
- Monitoring for non-native vertebrate pests continued using remote sensing wildlife cameras and offset area wide traverses for opportunistic scat collections. Evidence of foxes, dogs, pigs, and cats were recorded indicative of roaming and presence across the broader offset property. Relative Abundance Index calculations indicate a reduction in dogs and slight increase in foxes and cats.
- No Koala-predator interactions were recorded nor were any other impacts to Koala detected.
- One instance of Koala infected with chlamydia was recorded. An ongoing program is in place to continue monitoring Koala Crossing's Koala population to ensure they are healthy and thriving. Disease records taken throughout the past 5 years suggest that QTFN and Koala Ecology Group intervention is reducing the incidence of chlamydia in the broader population, and that Koalas from the offset area have lower incidence of disease generally than those from the agricultural matrix to the west of Koala Crossing.

7. EPBC approval conditions compliance table

The EPBC Act approval conditions for the project are replicated in **Table 3** with a designation on compliance or non-compliance if the condition was applicable during the reporting period, and evidence and comments as necessary. A copy of the EPBC approval and conditions is provided in **Appendix A**.

Table 3: EPBC approval conditions compliance table

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence/comments
Project Site			
1	The approval holder must not remove or fragment more than 46.3 hectares of Koala habitat within the project site.	Compliant	A total of 18.9 ha that is habitat critical to the survival of the koala has been cleared to date (refer Plan 2).
Management measures			
2	The approval holder must ensure a pre-clearance survey is undertaken by a suitably qualified person immediately prior to any clearing of vegetation within the project site, to identify any Koalas present.	Compliant	All clearing to date has included a pre-clearance survey undertaken by qualified and experienced fauna spotter catcher. Two koalas were observed during clearing during this reporting period. Fauna spotter catcher reports prepared during this reporting period are provided at Appendix B and C .
3	The approval holder must not clear any vegetation supporting any Koalas until such time that any present Koalas vacate the vegetation or are relocated by a suitably qualified person	Compliant	All clearing to date has been completed under the supervision of a qualified and experienced fauna spotter catcher. Two Koalas were recorded within clearing areas during this reporting period. One was observed outside of the clearing area, and the second self-relocated to outside of the clearing area. Clearing of vegetation was and will continue to be undertaken in accordance with the site-specific Vegetation Clearing and Fauna Management Plans (VCFMPs).

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence/comments
4	Prior to the commencement of the action, the approval holder must develop and implement a Koala Management Plan. The Koala Management Plan must describe measures to be implemented for the life of the approval to minimise Koala mortality attributable to dog attack and vehicle strike within the project site.	Compliant	<p>Prior to the commencement of the action, the approval holder developed and implemented a Koala Management Plan (KMP) dated 30 November 2018, prepared by SHG. The KMP lists actions and legislative requirements to be put in place to manage construction impacts and provides a framework for a number of operational management measures including:</p> <ul style="list-style-type: none"> a. Conservation areas set aside for Koala usage b. Incorporation of education and prohibition signage within open space and road reserves c. On-lot education campaigns to raise consumer awareness of local Koala populations; and d. Provide ongoing resources and facilities for monitoring the success of this management plan. <p>Implementation of the KMP is described in section 8 of this report and Table 4.</p>
5	The approval holder must publish the Koala Management Plan on its website prior to commencement of the action and the Koala Management Plan (or any subsequent revised versions) must remain on the approval holder's website for the life of the approval.	Compliant	The KMP was published on the approval holder's website on 18 February 2019 prior to the commencement of the action on 16 December 2019. The KMP remains available on the approval holder's website.
Compensation measures			
6	To compensate for the loss of 46.3 hectares of Koala habitat within the project site, the approval holder must, prior to the commencement of the	Administrative non-	The approval holder legally secured 65.69 hectares of Koala habitat at the offset area on 7 June 2018 via a Voluntary Declaration under

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence/comments
	action, legally secure a minimum of 65.69 hectares of Koala habitat at the offset site. Within 20 business days of legally securing the offset, the approval holder must provide the Department with evidence of when the offset was legally secured, and what mechanism was used to legally secure the offset.	compliance – Resolved	the <i>Vegetation Management Act 1999</i> (Qld). The Department was notified on 2 August 2018 that an offset for impacts on the Koala had been secured, which was past the 20-business day notification period. The Department were advised of the administrative non-compliance. The Department/Minister has not requested any further information from the Approval holder.
7	The approval holder must, for the life of the approval, ensure there is no net loss in the extent of Koala habitat that is legally secured at the offset site under Condition 6.	Compliant	The approval holder legally secured 65.69 ha of Koala habitat at the Koala Crossing Offset Area through a Voluntary Declaration administered under the <i>Vegetation Management Act 1999</i> . The offset area is managed in accordance with the Offset Area Management Plan, ensuring no net loss of Koala habitat within the offset area.
8	The approval holder must ensure that within 10 years after legally securing the offset, the quality of Koala habitat is improved, relative to the baseline quality of 6, across 50 per cent of the offset site.	Compliant	<p>The Offset Area Management Plan (OAMP) dated 1 March 2017, prepared by QTFN, ensures that within 10 years after legally securing the offset, the quality of Koala habitat is improved, relative to the baseline quality of 6, across 50 per cent of the offset site.</p> <p>Should the approval holder become aware the outcomes of Condition 8 are not on track to be achieved, the approval holder will report to the Department in writing within 20 business days in accordance with Condition 11.</p>
9	The approval holder must ensure that prior to the expiry of the approval, the Koala habitat across 100 per cent of the offset site is of no less than quality 8.	Compliant	The OAMP ensures that that prior to the expiry of the approval, the Koala habitat across 100 per cent of the offset site is of no less than quality 8.

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence/comments
			Should the approval holder become aware the outcomes of Condition 9 are not on track to be achieved, the approval holder will report to the Department in writing within 20 business days in accordance with Condition 11.
10	The approval holder must prepare and implement a monitoring programs for the life of the approval. The results of the monitoring program must be adequate to inform adaptive management and demonstrate whether the outcomes in Condition 7, Condition 8 and Condition 9 are being met.	Compliant	The approval holder has prepared and implemented an OAMP for the life of the approval. The plan provides a land management guidance tool which directs adaptive management actions such that a demonstrable increase in Koala habitat quality is achieved throughout the offset site. Refer to Section 9, Table 5 for assessment against the OAMP.
11	If, at any time during the life of the approval, the approval holder identifies that the outcomes specified in Condition 7, Condition 8 and Condition 9 are not on track to be achieved, the approval holder must report to the Department in writing within 20 business days of becoming aware. The report must state the cause, the response measures (including timeframes for reporting the success of those measures to the Department) and the actions to prevent further occurrences.	Not applicable	<p>The approval holder and SHG are not aware of any potential or suspected non-compliance with the conditions during the reporting period.</p> <p>Should the approval holder become aware that the outcomes of Conditions 7, 8 and/or 9 are not on track to be achieved, the approval holder will report to the Department in writing within 20 business days.</p>
12	If the Minister is not satisfied that the outcomes required by Condition 7, Condition 8 and Condition 9 are likely to be achieved, or is not satisfied that there is sufficient evidence that the outcomes required by Condition 7, Condition 8 and Condition 9 are likely to be achieved, the Minister may (in writing) request the approval holder to submit a plan for the Minister’s	Not applicable	The approval holder has prepared and implemented the approved KMP. The Minister has not requested the approval holder to submit a subsequent plan for approval to monitor, manage, avoid, mitigate, offset, records or report on, impacts to Koala habitat.

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence/comments
	<p>approval, to monitor, manage, avoid, mitigate, offset, record or report on, impacts to Koala habitat.</p> <p>a. The Minister may set a timeframe in which the plan must be submitted, and may designate that the plan must be prepared or reviewed by a suitably qualified person (or another specified person).</p> <p>b. If the Minister approves the plan in writing then the approval holder must implement the approved plan (or a version if approved in writing by the Minister or otherwise allowed under the conditions).</p>		

Administration

13	Within 20 business days after the commencement of the action, the approval holder must advise the Department of the actual date of commencement of the action.	Compliant	The date of the commencement of the action was 16 December 2019 and the department was notified on the 17 December 2019.
14	The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement any management plans or monitoring programs required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	Compliant	SHG records and holds all relevant information for this EPBC approval on behalf of the approval holder. Electronic records of all material are held collectively by SHG and approval holder and will be made available upon request in accordance with section 458 of the EPBC Act, or if required to verify compliance with the conditions of approval.

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence/comments
15	Within 60 business days of every 12 month anniversary of the commencement of the action, the approval holder must publish a report on its website addressing compliance with each of the conditions of this approval, including implementation of any management plans or monitoring programs as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published. The Minister may provide written consent to the approval holder to cease reporting under this condition if satisfied additional reports are not warranted.	Compliant	The anniversary of the commencement of the action is 16 December. The annual deadline for publishing the report addressing compliance with each of the conditions of the approval (i.e., Annual Compliance Report) is 16 March. Documentary evidence providing proof of the date of publication will be provided to the Department when the report is published. Where the annual deadline is not a business day in Brisbane, the following business day is taken to be the due date.
16	The approval holder must report any potential or actual contravention of the conditions of this approval to the Department in writing within 5 business days of the approval holder becoming aware of the potential or actual contravention.	Not applicable	The approval holder and SHG are not aware of any potential or actual contravention of the conditions of the approval during the reporting period. Should the approval holder become aware of any potential or actual contravention of the conditions of the approval, the approval holder will report to the Department in writing within 5 business days.
17	Upon the direction of the Minister, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor and criteria must be approved by the Minister prior to the commencement of the audit. The audit report must address the criteria to the satisfaction of the Minister.	Not applicable	The Minister has not directed the approval holder to conduct an independent audit of compliance.

Condition number / reference	Condition	Is the project compliant with this condition?	Evidence/comments
18	If, at any time after 5 years from the date of this approval, the approval holder has not commenced the action, then the approval holder must not commence the action without the written agreement of the Minister.	Not applicable	The action commenced on 16 December 2019.

8. Koala Management Plan

A review of the KMP commitments and implementation is provided in **Table 4**.

Table 4: Koala Management Plan implementation

No.	Commitment	Evidence/comments/status
Site Design		
KMP-1	<p>Bundamba Creek Corridor</p> <p>Areas containing highest ecological values, being Bundamba Creek, identified during surveys by field Ecologists have been designated as conservation within the development layout, ensuring that impacts on these areas were avoided. The site layout has been designed to retain high value areas of habitat which includes the retention and rehabilitation of 17.2 ha of Critical Habitat for the Koala along Bundamba Creek.</p>	<p>The Bundamba Creek Corridor has been preserved and subject to ongoing rehabilitation and management activities. Regular inspections and monitoring commenced prior to the approved action and continued throughout the second reporting period. The entire Bundamba Creek Rehabilitation Area was certified 'off maintenance' in July 2023 and is now wholly under the ownership of Ipswich City Council.</p>
Construction Management		
KMP-2	<p>Fauna</p> <p>Engage a registered fauna spotter/catcher to protect wildlife from the impacts of clearing. This includes the preparation of management plans (e.g. Wildlife Protection and Management Plan (WPMP) and Wildlife and Habitat Impact Mitigation Plan (WHIMP)), attendance at key project milestones such as the pre-start meeting, pre-clearance reporting and post-works reporting. The fauna spotter/catcher management plans incorporate methods for relocating fauna during clearing activities.</p>	<p>All clearing activities have been undertaken with the supervision of a qualified and experienced fauna spotter catcher with pre-clearance reports produced prior to clearing.</p>
KMP-3	<p>Vegetation clearing</p>	<p>Prior to commencing clearing activities, all responsible parties are provided a copy of the approval documents within the Pre-Start Packages. The</p>

No.	Commitment	Evidence/comments/status
	<p>Clearing, rehabilitation and revegetation will occur in a series of small stages, sequentially in accordance with the endorsed Vegetation Clearing and Management Plan and Fauna Management Plan. Pre-starts will be held with stakeholders.</p> <p>Vegetation clearing activities are supervised by suitably qualified person/s that adhere to current industry practices that protect the welfare of animals. These activities require demarcating the vegetation clearing limit prior to commencing clearing work. Subsequent reporting is made available to stakeholders and the public.</p>	<p>environmental plans provided stipulate environmental management requirements pertinent to each stage of construction and measures for vegetation management (clearing and protection), protection of MNES fauna (Koala) and other native wildlife, maintenance of safe wildlife movement opportunities, fauna habitat rehabilitation, threatened flora management and pest management. Prior to clearing, the works areas are demarcated and an on-site pre-start held with all responsible parties and Ipswich City Council.</p> <p>All previous and future clearing have and will be supervised by a qualified and experienced fauna spotter catcher. Specific actions include the inspection of the demarcated boundary/works extent and ensuring clear paths for fauna to reach safe havens were provided. The clearing reports for this reporting period are provided at Appendix B and C.</p>
KMP-4	<p>Vegetation clearing</p> <p>Where a Koala is present within a clearing zone, the tree will be marked with distinctive flagging (and other advisory means as required) and machinery operators will be briefed on the location of the area. No clearing works can occur within 20 m of the tree retaining a Koala until the animal has moved on via its own volition (where the strategy is to allow the Koala to move of its own accord, overnight). On the following day, the tree and retained area, are to be checked again prior to their removal. If necessary, the procedure is repeated until the Koala has moved.</p>	<p>Vegetation clearing has been conducted in accordance with the KMP and site specific VCFMP. During the reporting period, two Koalas were observed during clearing for the Amory. One was observed outside of the clearing area, and the other successfully self-relocated outside of the clearing area before clearing restarted.</p>
KMP-5	<p>Vegetation clearing – fencing</p>	<p>Prior to clearing, the works areas are demarcated with the fencing signed-off by the Environmental Coordinator and Ipswich City Council at the pre-start meeting.</p>

No.	Commitment	Evidence/comments/status
	Prior to vegetation clearing, install a temporary fauna exclusion fence around the area of clearing works and maintain the fence until the completion of major civil works.	
KMP-6	<p>Adaptive Management</p> <p>As a part of this strategy the following minimal protocols are to be applied in the event of koala injury or mortality as a result of clearing or construction:</p> <ol style="list-style-type: none"> 1. Clearing and construction is immediately ceased 2. The DEE is notified in writing within 48 hours of the koala injury or mortality occurring 3. Measures for minimising impacts to koalas as a result of clearing and construction are revised, in consultation with a suitably qualified person to reduce the likelihood of koala injury or mortality before clearing and construction recommences. 	Works that have the potential to impact fauna (e.g. clearing) are completed under the supervision of a fauna spotter catcher. There have been no instances of Koala injury or mortality recorded as a result of clearing. Adaptive management protocols are included in the site-specific VCFMP.
KMP-7	<p>Bundamba Creek Rehabilitation – Weed Management</p> <p>Weed removal will be undertaken in three stages: primary weed removal stage, secondary or follow-up weeding and maintenance weeding phase.</p>	Rehabilitation works and on-maintenance monitoring within Bundamba Creek have been completed. The entire Bundamba Creek corridor was accepted as “off-maintenance” by Ipswich City Council in July 2023.
KMP -8	<p>Bundamba Creek Rehabilitation – Revegetation</p> <p>Post weed-removal, rehabilitation areas will undergo revegetation to varying degrees, depending on the level of disturbance. It involves the cultivation and planting of native species and maintenance in the form of watering, continued weed removal, erosion control and ongoing management. The replanted species used within rehabilitation areas will be species endemic to the local area</p>	The rehabilitation area has undergone revegetation through numerous largescale planting events over the rehabilitation period. Post revegetation monitoring assessed success and initiated replacement plantings where plant stock had failed. These works have been completed, and the Bundamba Creek corridor was accepted as “off-maintenance” by Ipswich City Council in July 2023.

No.	Commitment	Evidence/comments/status
	and will reflect the naturally occurring regional ecosystems. This will include a high proportion of primary and secondary Koala food trees.	
Operational Management		
KMP-9	<p>General – Maintenance of Bundamba Creek Corridor</p> <p>Bundamba Creek corridor will undergo rehabilitation during the construction phase. Once rehabilitation is complete, the corridors will be transferred to ICC for the long term maintenance of the corridors</p>	<p>Rehabilitation works within the 50 m waterway buffer to Bundamba Creek extending from Stage 9 (southern interface with town centre holdings) to Stage 15 (western boundary with adjacent Defence Housing Australia landholdings) proceeded prior to the commencement of the approved action (i.e. 16 December 2019) and have continued throughout the current reporting period. The scope of works for the waterway buffer includes weed management, rehabilitation, revegetation, site stability and erosion management. Combined these actions increase available Koala habitat and improve connectivity for Koalas along Bundamba Creek.</p> <p>Following the completion of the establishment period and on-maintenance monitoring, part of the Bundamba Creek Corridor was accepted as ‘off maintenance’ in July 2023.</p>
KMP-10	<p>General – Lifestyle Guidelines Package</p> <p>The “Lifestyle Guideline” documentation will be issued to each new resident and is designed to help promote a range of ecological sustainable living principles. The Lifestyle Guidelines will be used to directly educate and raise awareness of a large audience towards the management of the Bundamba Creek Corridor and Koala habitat values. Topics included within the education documents include:</p> <ul style="list-style-type: none"> • Appropriate plant selection on allotments • Inappropriate planting species (known local or declared weed species) 	<p>The ‘Living with Koalas Lifestyle Guidelines’ documentation will be issued to each new resident and is accessible on the Amory website at https://amoryripley.com.au/builders-portal/</p>

No.	Commitment	Evidence/comments/status
	<ul style="list-style-type: none"> • Management of household scale run off • Protection of native animals and the types of native animals residents could expect to see within Conservation Corridor • Understanding storm water devices • Appropriate management of domestic animals • Location of dog on-leash and off-leash areas ☒ Key local and state phone numbers to contact if distressed or orphaned fauna are located. 	
KMP-11	<p>Traffic A number of measures will be imposed to avoid and mitigate the risk of Koalas being hit by vehicles. These measures include:</p> <ul style="list-style-type: none"> • Separation of conservation areas and residential areas. Koala habitat will not form part of the primary landscaping of the development footprint so that Koalas are not enticed to enter residential areas. • Imposition of low vehicle speeds (i.e. 50km/hr) to reduce the risk of collisions where adjoining conservation land. Under Queensland traffic laws, vehicle speed limits are restricted to 50km/h on built up residential roads. • Erection of Koala awareness signage adjoining proposed conservation areas. • Avoiding roads intercepting corridors. • Integration and construction of fauna movement solutions and signage should roads intercept corridors. 	<p>Measures have been implemented throughout the various stages of development to avoid and mitigate the risk of Koala-vehicle interactions. The masterplan design ensures that separation is provided between residential areas and conservation areas and roads avoid bisecting corridors. As such, no roads bisect the Bundamba Creek Corridor or detention basin rehabilitation and weed management area and Koala signage has been installed within the basin outlet area and along the Bundamba Creek corridor.</p> <p>Speed limits within the developed stages are a maximum of 50 km/h and the existing traffic volume has not necessitated the installation of fauna exclusion fencing along roads. Construction of roads within following stages are to comply with the KMP.</p> <p>A discussed above, new residents receive the ‘Living with Koalas Lifestyle Guidelines’ documentation to raise awareness about local wildlife and protection of Koalas.</p>

No.	Commitment	Evidence/comments/status
	<ul style="list-style-type: none"> New residents will be issued with a “Lifestyle Guideline” to raise awareness about local wildlife and to educate residents about the protection of Koalas in the area. <p>Wildlife movement solutions have been identified as an effective tool to mitigate the effects of fragmentation caused by roads. In essence, wildlife crossings if ultimately required will include the following elements:</p> <ul style="list-style-type: none"> Reduced vehicle speed limits (≤ 50 km/h) Wildlife crossing signage Vegetation adjoining the road Demarcated road treatment surface to raise driver awareness Where seen supportive of the crossing outcomes the inclusion of specific lighting regimes. Exclusion fencing funnelling animals towards the safest road crossing point 	
KMP-12	<p>Dog Management</p> <p>The following specific measures will be employed to mitigate potential threats from dogs:</p> <ul style="list-style-type: none"> Dogs will be restricted from entering conservation areas unless they are controlled on a lead. Fenced ‘off-leash’ areas / dog facilities will be constructed within recreational parkland in the estate, to counterbalance conservation land being strictly ‘dog on leash’ areas. 	<p>Dogs are not permitted off-leash within the Bundamba Creek corridor. The estate provides opportunities for residents to enrich pet lives through on-leash and off-leash facilities. A connected shared path around the estate and connectivity between developed Stages providing ample on-leash activities external to the conservation area and Pebbles Dog park located within Ecco Ripley accessible from Ripley Road and Joy Chambers Circuit provides a fenced off-leash dog park. New residents receive the ‘Living with Koalas Lifestyle Guidelines’ documentation to raise awareness about local wildlife and protection of koalas.</p>

No.	Commitment	Evidence/comments/status
	<ul style="list-style-type: none"><li>• New residents will be issued with a 'Lifestyle Guideline' to raise awareness about local wildlife and to educate residents about the protection of Koalas in the area and appropriate dog management.	

9. Offset Area Management Plan

A review of the OAMP commitments and implementation is provided in **Table 5**.

Table 5: Offset Area Management Plan implementation

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
Koala Occurrence	<ul style="list-style-type: none"> Increase koala density within the offset area 	<ul style="list-style-type: none"> Baseline koala density survey completed June 2015 using Koala Rapid Assessment Method (Woosnam-Merchez et al. 2012) and SAT and line transect surveys (Phillips and Callaghan, 2011; Dique et al. 2003) Replicated koala density surveys undertaken within the offset area at years 5 and 10 from the date when the offset is legally secured. Koala density surveys to be undertaken by a suitably qualified environmental scientist 	<p>Baseline</p> <ul style="list-style-type: none"> Baseline Surveys were completed by QTFN across the offset area including opportunistic surveys and camera trapping. <p>Year 5</p> <ul style="list-style-type: none"> An increase in Koala density was documented as part of Year 5 of the offset. <p>Year 7 progress</p> <ul style="list-style-type: none"> Year 7 offset area surveys completed by QTFN detected evidence of Koala across the reporting period, both directly (camera trapping) and indirectly (SAT surveys). Koala observations indicate an active population of Koalas on the site. <p>Opportunistic surveys continue annually and the next intensive surveys are scheduled for Year 10 (2028). Should opportunistic surveys suggest a reduction in Koala numbers between 5-year survey</p>

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
			events a supplementary survey will be undertaken to confirm and review the likely cause of reduced occurrence.
Vegetation Composition	<ul style="list-style-type: none"> • Vegetation composition maintains a 'high' score value in relation to habitat that is critical to the survival of the koala. • No significant increase in weed cover for species that could adversely affect the structural composition of vegetation within the offset area in relation to koala habitat value (i.e. weed species that are shrubs, trees or vines). • Retain and enhance the structure and floristic diversity of canopy vegetation. • Retain and enhance the structure and floristic diversity of middle and understorey vegetation. • Ongoing retention and recruitment of koala food trees. • Permanently remove existing threat of habitat degradation associated with clearing, development or other incompatible land uses. • Domestic livestock excluded from offset area (unless controlled grazing required for fire risk management) 	<ul style="list-style-type: none"> • Monitoring of canopy composition with respect to koala food tree species; adaptive management if required. Monitoring to include representative surveys of all applicable (koala habitat) vegetation communities within the offset area. For example, tertiary-level vegetation surveys in accordance with Neldner et al (2012). • Monitoring of weed infestations; adaptive management of shrub, tree, and vine weed species if required. • Flora surveys to be undertaken by a suitably qualified environmental scientist. • To remove the risk of habitat degradation associated with clearing, development or other incompatible land uses, the entire 65.69 ha area will be managed for conservation purposes. • Given that the subject property boundary is currently fenced in koala-permeable fencing, livestock will be excluded from the offset area through at least one of the following mechanisms: 	<p>Weed assessments are conducted annually to compare results from baseline surveys. Permanently marked transects are surveyed in accordance with Nelder <i>et al</i> 2015 in a 50 x 10 m transect and established photo points to monitor progress.</p> <p>Weed treatment occurred in January and June of 2024. Monitoring showed the site has a lower mean transect coverage of <i>Lantana camara</i> than the broader Koala Crossing property, with decreases in two of three permanent transects on site. The third recorded an increase. Overall, mean transect coverage was stable through the reporting period.</p> <p>BioCondition score across the site generally saw a slight decline, though this is largely attributed to a change in the utilised benchmark RE to better represent the current vegetation composition.</p> <p>The 2020-2025 Weed Strategy will continue to be followed, with follow-up weed control conducted to address the established <i>L. camara</i> coverage in the next reporting period.</p>

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<ul style="list-style-type: none"> - Livestock will not be kept on the property - Koala-friendly fencing will be erected along the northern boundary of the offset area to exclude livestock grazing outside of the offset area yet within the subject property in accordance with a relevant guideline such as Note G4 – Wildlife Friendly Fencing and Netting (Land for Wildlife, nd). • Domestic livestock will be only be introduced in the event that a fire risk professional (e.g. representative of Queensland Rural Fire Service) and a suitably qualified environmental scientist deem that conditions are not suitable for an ecological burn and that grazing is appropriate to manage a high level of fire risk. In this event, a maximum of 12 head of domestic livestock may be introduced for no more than a three (3) consecutive week period. Level of risk (and any need to repeat this grazing cycle) is to be re-assessed by the aforementioned professionals following the grazing event. • Vegetation clearing will not be undertaken within the offset area under any circumstances, except the following: <ul style="list-style-type: none"> - Where necessary for the removal of weeds; 	

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<ul style="list-style-type: none"> - To establish and maintain fencing around the boundary of the offset area; - To establish and maintain firebreaks and fire trails in accordance with an Offset Area Bushfire Management Plan that has been prepared by a suitably qualified professional (minimum two years professional experience in bushfire risk management planning); and - To remove or reduce imminent risk of serious personal injury or damage to infrastructure posed by the vegetation, and only to the extent necessary to mitigate the risk. This action to be undertaken in accordance with the relevant legislative requirements in place at the time of clearing, including the use of registered fauna spotters. 	
Habitat Connectivity	<ul style="list-style-type: none"> • Maintain contiguous landscapes to allow koalas to establish new territories, facilitate gene flow and respond to environmental changes. • Permanently remove existing threat of habitat degradation associated with clearing, development or other incompatible land uses. 	<p>To remove the risk of habitat degradation associated with clearing, development or other incompatible land uses, the entire 65.69 offset area will be managed for conservation purposes.</p> <p>Vegetation clearing will not be undertaken within the offset area under any circumstances, except the following:</p>	<p>Firebreak inspections were completed monthly during the 2023-2024 monitoring period. There has been no clearing undertaken within the offset area with the exception of weed removal and as such no change to site connectivity.</p>

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
	<ul style="list-style-type: none"> Contribute to koala movement and dispersal through the Flinders Karawatha corridor through the establishment of a protected habitat corridor (minimum 700 m width). 	<ul style="list-style-type: none"> Where necessary for the removal of weeds; To establish and maintain fencing around the boundary of the offset area in accordance with relevant legislation; To establish and maintain firebreaks and fire trails in accordance with an Offset Area Bushfire Management Plan that has been prepared by a suitably qualified professional and relevant legislation; and To remove or reduce imminent risk of serious personal injury or damage to infrastructure posed by the vegetation, and only to the extent necessary to mitigate the risk. This action to be undertaken in accordance with the relevant legislative requirements in place at the time of clearing including the use of registered fauna spotters. The subject property boundary is currently fenced in koala-permeable fencing. Any new or replacement fencing is to be 'fauna-friendly' in accordance with a relevant guideline such as Note G4 – Wildlife Friendly Fencing and Netting (Land for Wildlife, nd). 	

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
Dogs	<ul style="list-style-type: none"> Reduction of risk of koala mortality or injury by dog attack within the offset area through reduction in wild dog abundance. 	<ul style="list-style-type: none"> An initial survey to establish a baseline of wild dog abundance within the offset area was conducted for the entire property in June 2015 with subsequent monitoring occurring every six months. The survey method used for the initial abundance survey is informed using best practice methodology and applicable guidelines available at the time of survey (e.g. DoE, 2007 and Mitchell and Balogh, 2007). Baseline predator abundance survey was undertaken by a suitably qualified person (e.g. pest animal control professional or ecologist with at least two years relevant professional experience). Offset area wide wild dog control program was undertaken following the monitoring period in June 2015. Where practicable and to increase the effectiveness of a control program the landholder will seek to coordinate control programs with comparable activities being undertaken by neighbouring landholders. Post the initial control event, presence/absence surveys for wild dogs are to be undertaken each two months by the landholder. Post initial control event, abundance surveys for wild dogs to be undertaken bi-annually by a suitably qualified person (e.g. pest animal 	<p>Monitoring of non-native vertebrate pests continued during Year 7 of the offset utilising remote sensing wildlife cameras and opportunistic scat collections.</p> <p>Given that the movement range of feral predators extends beyond the specific offset area, Relative Abundance Index (RAI) are presented including the data from any camera trapping station with projected territories of any feral animal that overlap with the offset area.</p> <p>Across the offset area wild dogs, European red foxes, and wild pigs were recorded. Feral cats were also observed for the first time since 2018 in the broader Koala Crossing offset area, but were not present within the offset site specifically. Predator scat was not opportunistically observed this reporting period.</p> <p>The RAI of wild dogs increased in Summer 2023 where foxes decreased, with the opposite recorded in Winter 2024. Overall, this reporting period ended with a lower RAI of wild dogs compared to last reporting period, and a slight increase in foxes. Occurrence data showed a decrease and stabilisation of foxes, and a plateau and then decrease of dogs during Winter 2023 – 2024.</p>

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
Cats and Foxes	<ul style="list-style-type: none"> Reduction of risk of koala mortality or injury by feral cat and/or fox attack within the offset area through reduction in feral cat and fox abundance 	<p>control professional or ecologist with at least two years relevant professional experience).</p> <ul style="list-style-type: none"> Where post control surveys indicate there has been a recurrence of wild dogs within the offset area, control measures will be actioned using methods (controlled shooting or baiting) determined by a pest control professional in consideration of monitoring results. Any injured koala found on site will be sent to a veterinary clinic/wildlife rescue facility for rehabilitation. Installation of appropriate hazard warning signage indicating the offset area is subject to dog control for the purpose of managing the offset site for the benefit of koala. 	

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<ul style="list-style-type: none"> • Offset areas feral cat and fox control program to be undertaken with the aim of removing all feral cats and foxes from the offset area. The specific control method will be informed by the results of the initial fox abundance survey. Where practicable and to increase the effectiveness • of a control program the landholder will seek to coordinate control programs with comparable activities being undertaken by neighbouring landholders. • Post initial control, presence/absence surveys for fox and feral cat are to be undertaken by the landholder every two months. • Post initial control, bi-annual abundance surveys for fox and feral cat to be undertaken by a suitably qualified person (pest animal professional or environmental scientist with at least two years professional experience). • Where post control surveys indicate there has been a recurrence of feral cats and/or foxes within the offset area a control measure will be actioned using an appropriate control method (shooting, trapping or toxic baits). • Any injured koala found on site will be sent to a veterinary clinic/wildlife rescue facility for rehabilitation. 	

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<ul style="list-style-type: none"> Installation of appropriate public warning signage indicating the offset area is subject to feral cat and fox control for the purpose of managing the offset site for the benefit of koala. 	
Vehicle Strike	<ul style="list-style-type: none"> Contribute to the reduction of risk of injury or death to koala in relation to vehicle strike both within the offset area and on adjacent roads. 	<ul style="list-style-type: none"> Signs were installed on the property boundary adjacent to unnamed public road that bisects offset area to alert traffic of the koala offset area and the presence of koalas in the local area. Signs were installed on the property boundary adjacent to the unnamed public road along the frontage to Lot 89 RP892014 to alert east bound traffic of the presence of koalas in the local area. Signs were installed on the property boundary adjacent to Mount Flinders Road along the frontage to Lot 86 RP892014 to alert west-bound traffic of the presence of koalas in the local area. Implementation of a slow speed requirement (40km/h) for vehicles traversing the offset area. Signs were installed indicating a slow speed area at the main entry points to the offset area. 	<p>There were no vehicle strike incidents recorded within the property during the reporting period.</p>
Barriers to Dispersal	<ul style="list-style-type: none"> Maintain and improve contiguous landscapes to allow koalas to establish new territories, 	<ul style="list-style-type: none"> To remove the risk of habitat degradation associated with clearing, development or other incompatible land uses, the entire 65.69 ha offset area will be legally secured as an area of 	<p>No vegetation clearing (excluding weeds) was undertaken in the offset area. Ongoing management of weeds and threats discussed in the items above reduce barriers to dispersal. The</p>

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
	<p>facilitate gene flow and respond to environmental changes.</p> <ul style="list-style-type: none"> • Retain and enhance the structure and floristic diversity of canopy vegetation. • Retain and enhance the structure and floristic diversity of middle and understorey vegetation. • Ongoing retention and recruitment of koala food trees. • Permanently remove existing threat of habitat degradation associated with clearing, development or other incompatible land uses. • Contribute to koala movement and dispersal through the Flinders Karawatha through the establishment of a protected habitat corridor (minimum 700 m width). 	<p>High Conservation Value under section 19F of the Vegetation Management Act 1999</p> <p>Given that the subject property boundary is currently fenced in koala-permeable fencing, livestock will be excluded from the offset area through at least one of the following mechanisms:</p> <ul style="list-style-type: none"> - Livestock will not be kept within balance areas of Lots 89 RP892014; or - Koala-friendly fencing will be erected along the southern boundary of the offset area to exclude livestock grazing outside of the offset area yet within the subject property in accordance with a relevant guideline such as Note G4 – Wildlife Friendly Fencing and Netting (Land for Wildlife, nd). <ul style="list-style-type: none"> • Domestic livestock will be only be introduced in the event that a fire risk professional (e.g. representative of Queensland Rural Fire Service) and a suitably qualified environmental scientist deem that conditions are not suitable for an ecological burn and that grazing is appropriate to manage a high level of fire risk. In this event, a maximum of 12 head of domestic livestock may be introduced for no more than a three (3) consecutive week period. Level of risk (and any need to repeat this 	<p>contiguous landscape has been maintained and improved to allow Koalas to establish new territories, facilitate gene flow and respond to environmental changes.</p> <p>Livestock are excluded from the offset area unless controlled grazing is required for fire risk management.</p>

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<p>grazing cycle) is to be re-assessed by the aforementioned professionals following the grazing event.</p> <ul style="list-style-type: none"> • Any fencing installed or replaced within the offset area is to be fauna-friendly in design as per a relevant guideline such as Wildlife Friendly Fencing Project (2014) or Land for Wildlife (nd). • Vegetation clearing will not be undertaken within the offset area under any circumstances, except the following: <ul style="list-style-type: none"> - Where necessary for the removal of weeds; - To establish and maintain fencing around the boundary of the offset area; or - To establish and maintain firebreaks and fire trails in accordance with an Offset Area Bushfire Management Plan that has been prepared by a suitably qualified professional. - To remove or reduce imminent risk of serious personal injury or damage to infrastructure posed by the vegetation, and only to the extent necessary to mitigate the risk. 	

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<ul style="list-style-type: none"> - Any clearing will include the use of registered fauna spotters 	
Hydrological Change	<ul style="list-style-type: none"> • To ensure the koala habitat within the offset area is maintained and the potential carrying capacity of the area is not reduced due to anthropogenic hydrological change. 	<p>if any actions are proposed that may significantly impact the current (at time of offset area being legally secured) hydrological regime and therefore potentially impact koala habitat within the offset area then the following actions will be required:</p> <ul style="list-style-type: none"> - Presentation of proposed hydrological change to DoE, detailing the potential impact to koala habitat within the offset area. This will include specialist reports detailing the nature of the hydrological change and the expected impact to the offset areas vegetation communities. - Only DoE approved hydrological change will be permitted within the offset area. 	<p>There have been no hydrological changes made to the offset area or wider property, maintaining Koala habitat and potential carrying capacity.</p>
Fire	<ul style="list-style-type: none"> • Minimise the risk of high-intensity fire within the offset area. • Minimise the risk of koala mortality within the offset area due to prescribed burning. 	<p>A suitably qualified professional has prepared an Offset Area Bushfire Management Plan, detailing: current vegetation condition and fire risk, locations of current and required firebreaks and fire control lines, current fuel loads, recommended actions and timeframes for maintenance of bushfire risk within the context of the adapted Regional Ecosystem Description</p>	<p>The Koala Crossing Fire Management Plan divides the property into Fire Management Zones: Land Management Zones, Exclusion Zones and Asset Protection Zones. Within the Land Management Zones the landscape is broken up into subzones (Fire Management Areas) according to practicable containment lines. The Fire Management plan details burning intervals recommended for these</p>

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<p>Database guidelines (refer below) and biodiversity outcomes sought for the offset area.</p> <ul style="list-style-type: none"> • With the exception of prescribed burning, which will only be undertaken for the purposes of biodiversity enhancement, the offset area is to be managed to avoid the occurrence of fire by: <ul style="list-style-type: none"> - Maintaining fire control lines relative to the offset area; and - Co-locating fire control lines with existing tracks and fence lines on the property where possible. • Existing fencing, firebreaks and fire control lines are to be kept clear of encroaching vegetation to a width as defined by the Offset Area Bushfire management Plan and in accordance with relevant legislation (e.g. Sustainable Planning Act 2009). • Vegetation within the offset area will be managed in accordance with the following specifications, which are adapted from the Regional Ecosystem Description Database fire management guidelines for the three vegetation types that occur within the offset area (RE 12.9-10.2, RE 12.9-10.7 and RE 12.8.24) (Queensland Herbarium, 2014): 	<p>FMA (KCFMP 2015 p.16). The EPBC 2015/7513 offset area is located in FMA 2.</p> <p>One low to moderate intensity burn occurred during the reporting period to reduce fuel loads and control <i>L. camara</i>.</p> <p>Firebreaks were inspected monthly during the reporting period with no maintenance required.</p>

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<ul style="list-style-type: none"> - SEASON: Summer to winter - INTENSITY: Low to moderate - INTERVAL: 4-25 years - STRATEGY: 40-60% mosaic burn. Burn with soil moisture and with a spot ignition strategy so that a patchwork of burnt/unburnt country is achieved - ISSUES: The fire regime will maintain a mosaic of grassy and shrubby understoreys. Ground litter and fallen timber habitats will be maintained by burning only with sufficient soil moisture. Burning will produce fine scale mosaics of unburnt areas. Variability in season and fire intensity will occur, as well as spot ignition in cooler or moister periods to encourage mosaics. • The following parameters will be adhered to throughout the planning and implementation of any prescribed burning: <ul style="list-style-type: none"> - Undertake pre-burn survey to identify areas of high koala activity; - No prescribed burning will be undertaken when female koalas are likely to be carrying dependent young (Note: this management 	

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<p>action will take precedence over the fire management guidelines outlined above);</p> <ul style="list-style-type: none"> - Prescribed burning will be only carried out during appropriate weather conditions (e.g. low temperature, low wind) and good soil moisture conditions; - Post-fire practices will be implemented to mitigate the risk of uncontrolled fire damage (e.g. extinguishing burning of large trees); and - Minimise the extent of burning so that the risk of injury or mortality to koalas is reduced, the risk of canopy scorch is lowered, whilst other biodiversity benefits to other species are achieved. <ul style="list-style-type: none"> • Prescribed burning will be undertaken in consultation with, and under the guidance of the Queensland Rural Fire Brigade. • Domestic livestock will be only be introduced in the event that a fire risk professional (e.g. representative of Queensland Rural Fire Service) and a suitably qualified environmental scientist deem that conditions are not suitable for an ecological burn and that grazing is appropriate to manage a high level of fire risk. In this event, a maximum of 12 head of domestic livestock may 	

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<p>be introduced for no more than a three (3) consecutive week period. Level of risk (and any need to repeat this grazing cycle) is to be re-assessed by the aforementioned professionals following the grazing event.</p>	
<p>Disease and/or pathogens</p>	<ul style="list-style-type: none"> • Reduce risk of the spread of koala and vegetation diseases within the offset area and adjacent areas of koala habitat. • Third party contractors do not enter site carrying pathogens. 	<ul style="list-style-type: none"> • Baseline offset area condition survey is to include assessment for signs of Phytophthora cinnamomi and Myrtle Rust were undertaken in March 2015 with no evidence of either disease. • To reduce the risk of introducing Chlamydia and Koala retrovirus into the resident population; uncontrolled translocation of koala is not permitted within the offset area. • Vegetation management activities which include tree lopping/felling, weed removal, tree planting (including nursery suppliers) are deemed to be high risk in the context of introducing pathogens that may potentially impact koala habitat. As such, any person engaged to undertake these • activities must satisfy the landholder that they have undertaken all reasonable steps to prevent the introduction of a pathogen/disease to the site (e.g. vehicle and equipment washdown prior to site entry). 	<p>The initial baseline survey for Koala health indicated no incidence of Koala diseases within the population at Koala Crossing. However, subsequent surveys indicated two instances of Koalas infected with Chlamydia, and another individual was observed during this reporting period. An ongoing program is in place to continue monitoring Koala Crossing’s Koala population to ensure they are healthy and thriving. Given the newly recorded diseased individual, further investigation and health assessment will be undertaken in 2025 across the broader Koala Crossing offset area.</p> <p>Disease records taken throughout the past years suggest that QTFN and Koala Ecology Group intervention is reducing the incidence of Chlamydia in the broader population, and that Koalas from the offset area have lower incidence of disease generally than those from the agricultural matrix to the west of Koala Crossing. To confirm disease status in 2019 and to enable a more standardised mode of monitoring disease status and its changes through the years, OWAD Environmental were contracted to</p>

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
Recovery value	<ul style="list-style-type: none"> • Maintain contiguous landscapes to allow koalas to establish new territories, facilitate gene flow and respond to environmental changes. • Permanently remove existing threat of habitat degradation associated with clearing, development or other incompatible land uses. • Contribute to koala movement and dispersal through the Flinders Karawatha through the establishment of a habitat corridor (minimum 700 m width). • Protect and conserve large, connected areas of koala habitat, particularly large, connected areas that support koalas that are: <ul style="list-style-type: none"> - genetically diverse/distinct; or - free of disease or have a very low incidence of disease; or - breeding (i.e. presence of back young or juveniles). 	<ul style="list-style-type: none"> • To remove the risk of habitat degradation associated with clearing, development or other incompatible land uses, the entire offset area will be managed for conservation purposes. • Vegetation clearing will not be undertaken within the offset area under any circumstances, except the following: <ul style="list-style-type: none"> - Where necessary for the removal of weeds; - To establish and maintain fencing around the boundary of the offset area; and - To establish and maintain firebreaks and fire trails in accordance with an Offset Area Bushfire Management Plan that has been prepared by a suitably qualified professional. - Will include the use of registered fauna spotters • Any fencing installed within the offset area is to be fauna-friendly in design (Wildlife Friendly Fencing Project, 2014). 	<p>collect fresh Koala scat for genetic disease. No signs of plant disease have been observed on-site.</p> <p>The offset area has been legally secured for conservation purposes removing the risk of habitat degradation associated with clearing, development or other incompatible land uses.</p> <p>Vegetation clearing, excluding the removal of weeds, has not been undertaken within the offset area. The contiguous landscape has been maintained and improved to allow Koalas to establish new territories, facilitate gene flow and respond to environmental changes.</p>

Attribute/ Threat	Outcomes	Actions	Evidence/comments/status
		<ul style="list-style-type: none">• To remove or reduce imminent risk of serious personal injury or damage to infrastructure posed by the vegetation, and only to the extent	

10. Summary

Saunders Havill Group was engaged by Ripley Town Center No. 1 Pty Ltd to prepare the fifth Annual Compliance Report for EPBC 2015/7513, as specifically required by Condition 13 of the approval granted on 16 October 2017 (refer **Appendix A**).

In accordance with Condition 1, the approval holder must not clear more than 46.3 ha of Koala habitat within the project site. To date, the approval holder has cleared 18.9 ha of critical Koala habitat.

Rehabilitation works within the 50 m waterway buffer to Bundamba Creek, extending from Stage 9 (southern interface with town centre holdings) to Stage 15 (western boundary with adjacent Defence Housing Australia landholdings), proceeded prior to the commencement of the approved action (*i.e.*, 16 December 2019). The Bundamba Creek East rehabilitation area has undergone full rehabilitation and establishment period and was accepted as “off-maintenance” by Ipswich City Council in July 2023.

The Year 7 Offset Area Management Report for the Koala Crossing offset area was issued prior to the finalising of this ACR. The annual report concluded that overall Koala values are increasing and threats were either stable or declining with the exception of cats and foxes which saw a slight increase. Ongoing management is required to ensure the improvement of Koala habitat quality on site.

Reviewing the above, the works carried out by the approval holder as part of the action are considered to be compliant with the approval granted under the EPBC Act.

11. Appendices

Appendix A

EPBC Act approval and conditions granted 16 October 2017

Appendix B

Fauna spotter catcher reports

Queensland Fauna Consultancy July and August 2024

Appendix C

Fauna spotter catcher reports

Australia Wide Environmental Consultants September 2024

Appendix D

QTFN Annual Offset Area Management Report – Year 7

Appendix A

EPBC Act approval and conditions
granted 16 October 2017



Approval

ECCO Ripley residential development, Ipswich, Queensland (EPBC 2015/7513)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted Bcove 4 Pty Ltd - ACN: 123 079 836
and
Ripley Town Holdings Pty Ltd - ACN: 112 588 217

proposed action To develop the residential development at Ripley Valley, Ipswich, Queensland. [See EPBC Act Referral 2015/7513 and approved variation to the action dated 29 March 2016].

Approval decision

Controlling Provision	Decision
Listed threatened species and communities (sections 18 & 18A)	Approved

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 31 July 2047.

Decision-maker

name and position James Barker
Assistant Secretary
Assessments and Governance Branch

signature

date of decision 16 / 10 2017

Conditions attached to the approval

Project site

1. The **approval holder** must not clear more than 46.3 hectares of **Koala habitat** within the **project site**.

Management measures

2. The **approval holder** must ensure a pre-clearance survey is undertaken by a **suitably qualified person** immediately prior to any clearing of vegetation within the **project site**, to identify any **Koalas** present.
3. The **approval holder** must not clear any vegetation supporting any **Koalas** until such time that any present **Koalas** vacate the vegetation or are relocated by a **suitably qualified person**.
4. Prior to the **commencement of the action**, the **approval holder** must develop and implement a Koala Management Plan. The Koala Management Plan must describe measures to be implemented for the life of the approval to minimise **Koala** mortality attributable to dog attack and vehicle strike within the **project site**.
5. The **approval holder** must publish the Koala Management Plan on its website prior to **commencement of the action** and the Koala Management Plan (or any subsequent revised versions) must remain on the **approval holder's** website for the life of the approval.

Compensation measures

6. To compensate for the loss of 46.3 hectares of **Koala habitat** within the **project site**, the **approval holder** must, prior to the **commencement of the action**, **legally secure** a minimum of 65.69 hectares of **Koala habitat** at the **offset site**. Within 20 **business days** of **legally securing** the offset, the **approval holder** must provide the **Department** with evidence of when the offset was **legally secured**, and what mechanism was used to **legally secure** the offset.
7. The **approval holder** must, for the life of the approval, ensure there is no net loss in the extent of **Koala habitat** that is **legally secured** at the **offset site** under Condition 6.
8. The **approval holder** must ensure that within 10 years after **legally securing** the offset, the **quality** of **Koala habitat** is improved, relative to the baseline **quality** of 6, across 50 per cent of the **offset site**.
9. The **approval holder** must ensure that prior to the expiry of the approval, the **Koala habitat** across 100 per cent of the **offset site** is of no less than **quality 8**.
10. The **approval holder** must prepare and implement a monitoring program for the life of the approval. The results of the monitoring program must be adequate to inform adaptive management and demonstrate whether the outcomes in Condition 7, Condition 8 and Condition 9 are being met.
11. If, at any time during the life of the approval, the **approval holder** identifies that the outcomes specified in Condition 7, Condition 8 and Condition 9 are not on track to be achieved, the **approval holder** must report to the **Department** in writing within 20 **business days** of becoming aware. The report must state the cause, the response measures (including timeframes for reporting the success of those measures to the **Department**) and the actions to prevent further occurrences.

12. If the **Minister** is not satisfied that the outcomes required by Condition 7, Condition 8 and Condition 9 are likely to be achieved, or is not satisfied that there is sufficient evidence that the outcomes required by Condition 7, Condition 8 and Condition 9 are likely to be achieved, the **Minister** may (in writing) request the **approval holder** to submit a plan for the **Minister's** approval, to monitor, manage, avoid, mitigate, offset, record or report on, impacts to **Koala habitat**.
 - a. The **Minister** may set a timeframe in which the plan must be submitted, and may designate that the plan must be prepared or reviewed by a **suitably qualified person** (or another specified person).
 - b. If the **Minister** approves the plan in writing then the **approval holder** must implement the approved plan (or a revised version if approved in writing by the **Minister** or otherwise allowed under these conditions).

Administration

13. Within 20 **business days** after the **commencement of the action**, the **approval holder** must advise the **Department** of the actual date of **commencement of the action**.
14. The **approval holder** must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement any management plans or monitoring programs required by this approval, and make them available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **Department's** website. The results of audits may also be publicised through the general media.
15. Within 60 **business days** of every 12 month anniversary of the **commencement of the action**, the **approval holder** must publish a report on its website addressing compliance with each of the conditions of this approval, including implementation of any management plans or monitoring programs as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the **Department** at the same time as the compliance report is published. The **Minister** may provide written consent to the **approval holder** to cease reporting under this condition if satisfied additional reports are not warranted.
16. The **approval holder** must report any potential or actual contravention of the conditions of this approval to the **Department** in writing within 5 **business days** of the **approval holder** becoming aware of the potential or actual contravention.
17. Upon the direction of the **Minister**, the **approval holder** must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor and criteria must be approved by the **Minister** prior to the commencement of the audit. The audit report must address the criteria to the satisfaction of the **Minister**.
18. If, at any time after 5 years from the date of this approval, the **approval holder** has not **commenced the action**, then the **approval holder** must not **commence the action** without the written agreement of the **Minister**.

Definitions

Approval holder: the person to whom the approval is granted, or any person acting on their behalf, or to whom the approval is transferred under section 145B of the **EPBC Act**.

Business days: a day other than a Saturday or Sunday or a day which is a public holiday for the whole of Queensland.

Commence / commenced / commencement of the action: the point at which clearing of vegetation for the purposes of the action either in a single event or cumulatively first exceeds 2 or more hectares.

Department: the Australian Government Department responsible for administering the **EPBC Act**.

EPBC Act: the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Koala/s: the Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) (*Phascolarctos cinereus* (combined populations of Qld, NSW and the ACT)) listed as a threatened species under the **EPBC Act**.

Koala habitat: any habitat, including forest or woodland, which contains species that are known **Koala** food trees (species of tree whose leaves are consumed by **Koalas**), including *Eucalyptus tereticornis*, *Eucalyptus crebra*, *Eucalyptus moluccana* and *Corymbia citriodora*.

Legally secure / secured / securing: means long-term protection under a legal mechanism that is either establishing a covenant on the title or a voluntary declaration under the *Vegetation Management Act 1999* (Qld), or establishing a Nature Refuge under the *Nature Conservation Act 1992* (Qld).

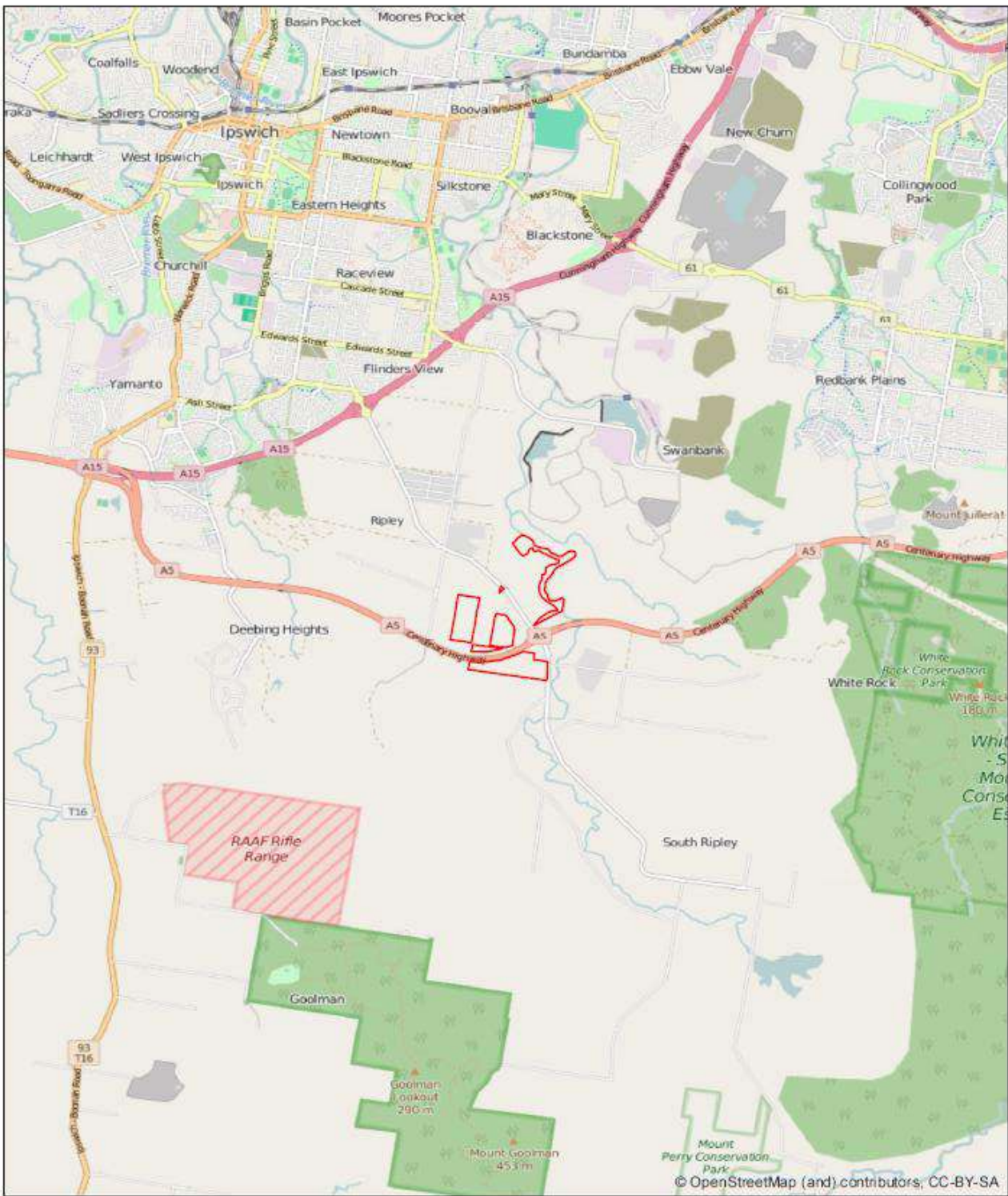
Minister: the Australian Government Minister responsible for administering the **EPBC Act** and includes a delegate of the **Minister**.

Offset site: the areas designated as 'Sekisui Rural E' and 'Sekisui Rural B' on the map at Attachment 2.

Project site: the area defined as 'project referral area' on the map at Attachment 1.

Quality: means the habitat quality score as calculated by biocondition surveys in accordance with Queensland's *Biocondition: A condition Assessment Framework for Terrestrial Biodiversity in Queensland. Assessment Manual (Version 2.2)* (Eyre *et al.* 2015), or any subsequent revised version.

Suitably qualified person: a person who has professional qualifications, training, skills and/or experience relevant to **Koalas** who can give authoritative assessment, advice and analysis in relation to the identification, safe capture and release and management of **Koalas** using the relevant protocols, standards, codes of conduct, methods or literature.



Legend

Project referral area

Figure A1 Project Site Context

Bbove 4 Pty Ltd & Ripley Town Holdings Pty Ltd

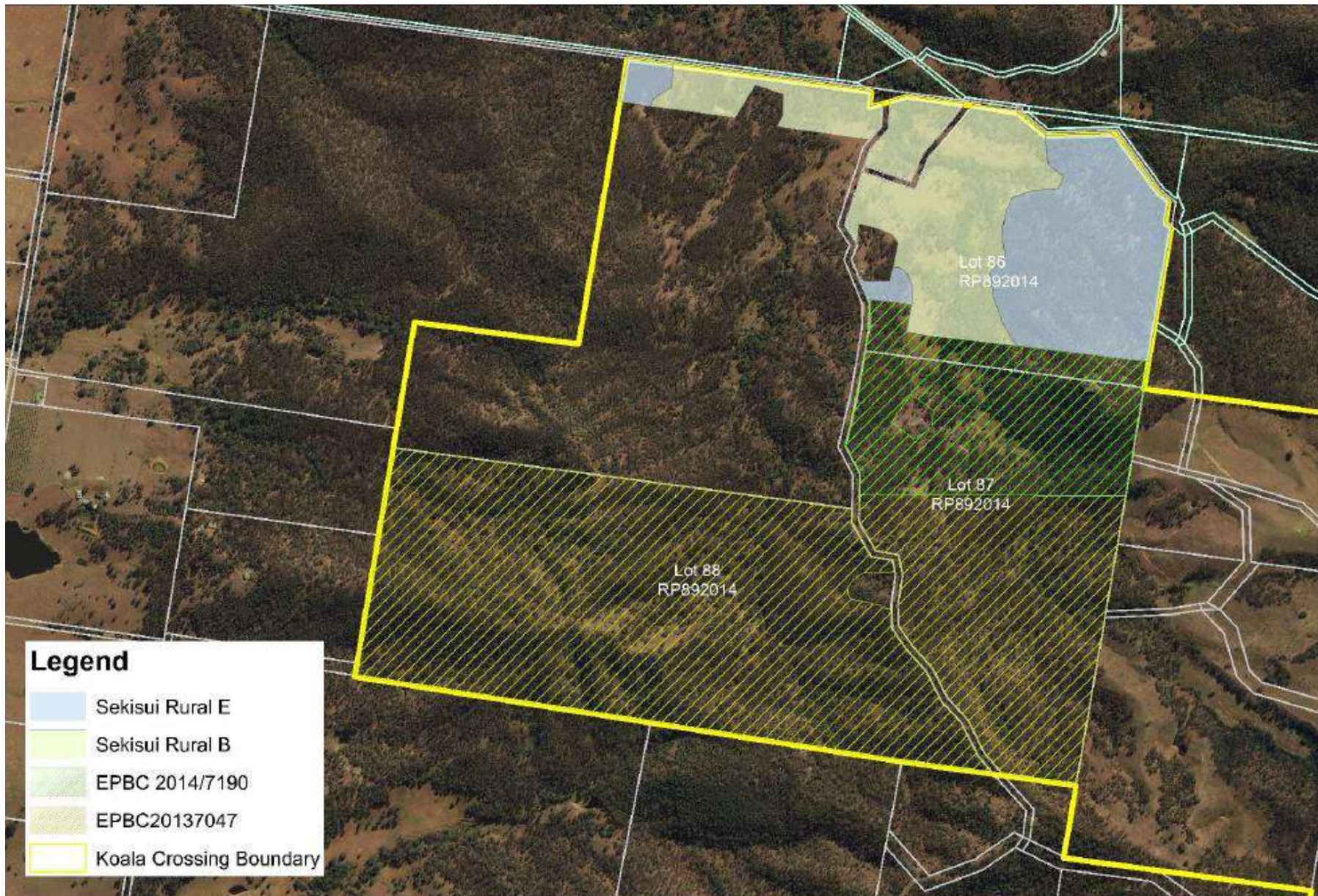
File ref. 6982E Figure A1 Site Context A
 Date 14/07/2016
 Project ECCO Ripley



0 500 1,000 2,000 3,000 m
 Scale (A4): 1:85,000 [GDA 1994 MGA Z56]



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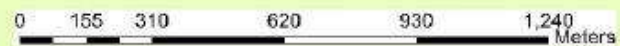


Legend

- Sekisui Rural E
- Sekisui Rural B
- EPBC 2014/7190
- EPBC20137047
- Koala Crossing Boundary



Koala Crossing Offset Area



Author: QTFN
Date: 20/1/18
Source: Cadastral Boundaries
Data supplied by: QTFN
Map: 20/1/18
Map: 20/1/18
Data to varying sources of data, spatial boundaries may not be precise.
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Appendix B

Fauna spotter catcher reports

Queensland Fauna Consultancy July and August 2024



July 2024

Fauna Spotter Catcher Pre-clearance Survey and Wildlife Protection & Management Plan

Amory Stages 1 and 2
695 Ripley Road, Ripley, Queensland
Report prepared for Winslow



Report prepared by
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Date:	04/07/2024
Title:	Fauna Spotter Catcher Pre-clearance Survey and Wildlife Protection & Management Plan, Amory Stages 1 and 2 - 695 Ripley Road, Ripley, Queensland
Author/s:	Bryan Robinson, Rebecca Coller
Reviewed by:	Bryan Robinson
Field personnel:	Rebecca Coller
Status:	Final Report
Filed as:	QFC FHA WPMP Winslow Amory Stages 1 and 2 July 2024.doc

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1. Introduction

1.1 Project Background

Queensland Fauna Consultancy Pty Ltd has been engaged by Winslow to conduct a Fauna Spotter Catcher Pre-clearance and Habitat Values Survey and present a subsequent report for Amory Stages 1 and 2 at 695 Ripley Road, Ripley, Queensland. The site location is presented in Map 1.

The objective of this report is to summarise the existing fauna values present and assign mitigatory strategies applicable to probable species likely to be encountered during the clearing of identified habitats throughout or within specific localities of the site. Fauna species both common and of elevated conservation value have been considered within the parameters of onsite investigations and, where provided to QFC, include review of current fauna and floristic reports that may influence the assemblages expected to utilise the micro habitats evident within the site.

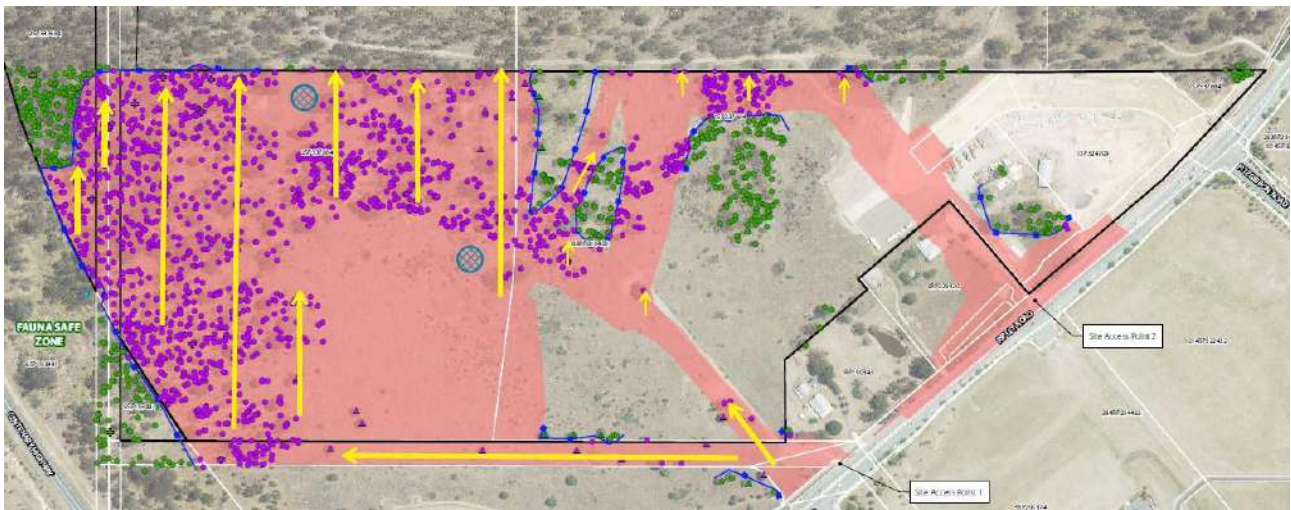
This review encompasses species identified under the provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and the Queensland *Nature Conservation Act 1992*. Further consideration is given, where applicable, to species of iconic, cultural and/or regional significance identified under commonwealth, state or local planning instruments aimed at the persistence of biodiversity values within the area.

1.2 Project Location and Site Description

Amory Stages 1 and 2 is located at along Ripley Road, Ripley, west of the Ripley Town Centre and north of the Centenary Highway. The total clearing area is approximately 24 hectares.

Existing features exhibit a remnant woodland vegetative complex bordering a grassy plain. Dominant trees species include *Acacia* species, *Eucalyptus tereticornis*, *E. siderophloia*, *E. crebra*, *E. moluccana*, *E. robusta*, *E. major*, *Corymbia citriodora*, *C. trachyphloia*, and *Angophora leiocarpa*, and there are scattered sections present where ornamental species are dominant. Understorey vegetation consists of grass, scattered shrubs, *Lomandra* species, and dense leaf litter.

Map 1: Project Location (clearing area contained within black and blue outline)



Amory Stages 1 and 2 (provided by Winslow, 2024)

1.3 Current Permits and Authorities

All activities conducted during the site investigations were implemented under the provisions of several permits issued to Queensland Fauna Consultancy Pty Ltd by the Department of Environment, Science and Innovation (DESI), and the Department of Agriculture and Fisheries (DAF). These permits and additional authorities are listed in Table 1.

Table 1: Current Permits and authorities issued to QFC

Permit/Authorisation	Permit Number	Expiry Date
Damage Mitigation Permit	WA0047114	31 st October 2025
Rehabilitation Permit	WA0054295	13 th September 2026
Scientific Purposes Permit	WA0032325	3 rd March 2026
Scientific User Registration	Registration Number 589	27 th February 2025
Animal Ethics	CA 2022/01/1569	27 th February 2025
General Fisheries Permit	262922	10 th May 2026

These permits and approvals enable QFC to conduct the investigation, observation and relocation of protected animals exposed to disturbance due to infrastructure expansion resulting in the destruction of natural and artificial habitats.

2. Methodology

A site inspection was carried out on 4th July 2024 and 12th July 2024 by Qld Fauna Consultancy. A standard set of observational techniques aimed at maximising the detection of fauna and the probable habitats they may occupy were employed to ascertain and identify the current fauna values throughout the project area. Where species of elevated conservation significance were foreseen as potentially present targeted searches were instigated to further evaluate individual species habitat.

Due to the habitat variability expressed across the development site the composition of investigations may include a range of features that entail specific components indicative of the presence of particular species or faunal groups. This may include where evident, observation of activity or signs of both historical and current use.

These may include but are not limited to the following:

- Identification of terrestrial microhabitats such as ground hollows, rock, burrows, leaf litter, stands of heavy vegetation, fallen branches and bark exfoliations;
- Identification of arboreal micro habitats including basal, trunk and limb hollows, tree fissures, bark exfoliates and arboreal termitaria;
- Identification of constructed arboreal micro habitats including bird nests and Ringtail Possum dreys;
- Artificial habitats including, but not limited to ornamental gardens, discarded rubbish, human dwellings and other infrastructure;
- Observation and investigation of aquatic habitats including dams, soaks, creeks, rivers and seasonally inundated vegetation communities. Artificial aquatic habitats may include constructed drains and culverts. Further components of interest include bank profiles and undercuts, submerged and/or exposed timber and rock, immediate aquatic and riparian vegetation, surfacing animals, nesting and/or feeding birds;
- Direct observation of active or exposed fauna within terrestrial, aquatic and arboreal habitats;
- Identification of scats, tracks and scratchings to determine fauna potentially present or to have historically utilised the site for either transient or longer-term life history purposes.

2.1 Specific methodology for Koalas *Phascolarctos cinereus*

Due to specific requirements and the cryptic nature of the Koala the following techniques were employed to assist in ascertaining the current and historical presence/absence status of the species at the site:

- Use of binoculars to inspect the crown, forks and trunk of trees for individuals currently occupying the site;
- 'Drip zone' searches at the base of known food trees for the presence of scats to a radius equal to that of the crown of individual trees;
- Inspection of trunks for scratchings indicative of use by Koalas.

3. Findings

The findings endeavor to demarcate the existing habitat profiles and the features present into three distinct groups: terrestrial, arboreal and aquatic. All habitat features present onsite are noted, however it is probable additional features will be present with these being accounted for during the Fauna Spotter Catcher process to be applied to all vegetation clearing across the site.

3.1 Terrestrial Habitat Features

The terrestrial fauna values of the site consist of different components and microhabitat features. This included an open low-level understorey consisting of grass and *Lomandra* species (Figure 1 to Figure 5), with sections exhibiting dense cover provided by weed species such as Lantana *Lantana camara* (Figure 6, Figure 7 and Figure 8), Corky Passionflower *Passiflora suberosa* (Figure 9), and Asparagus Fern *Asparagus aethiopicus* (Figure 10), and ornamental species (Figure 11). Dense leaf litter and basal bark exfoliations (Figure 12 to Figure 14) also feature on site, being present in abundance and at variable depths, providing refugial opportunities and microhabitat connectivity that can be exploited by many different native terrestrial vertebrate and invertebrate species.

The site is also exhibitive of scattered woody debris, hollow logs and stumps, timber stockpiles, scattered surface rock and small areas of rocky outcrops (Figure 15 to Figure 24), providing refugial and foraging opportunities, and a contributory factor to the provision of a variety of thermal and moisture gradients that can be exploited by a number of different native terrestrial vertebrate and invertebrate species.

A large amount of artificial debris is also present in the locality, adding to its potential habitat value for resident and transient fauna (Figure 25 to Figure 28). Terrestrial termite mounds feature heavily onsite (Figure 29, Figure 30 and Figure 31), with numerous mounds displaying recent excavations typical of the Short-beaked Echidna *Tachyglossus aculeatus* (Figure 32 and Figure 33).

Mammal assemblages may comprise both native and introduced species. Macropod scat and tracks were observed across the site (Figure 34 and Figure 35), with macropod species likely to occur on site including the Eastern Grey Kangaroo *Macropus giganteus*, Red-necked Wallaby *Notamacropus rufogriseus* and Swamp Wallaby *Wallabia bicolor*. Other native mammals which may occur on site include the Northern Brown Bandicoot *Isodon macrourus* which may be present in localities with significant vegetative ground cover.

These features collectively contribute to the potential presence of a variety of native fauna species utilising the area for refugial, foraging and other resources.

GPS coordinates for all indicative terrestrial habitat features are shown in Table 2. Localities for identified terrestrial habitat features are presented in Map 2. A comprehensive list of fauna species recorded in the region can be viewed in Appendix C.

Table 2: Localities for identified terrestrial habitat features

Number	Habitat Feature	GPS Coordinates (Latitude, Longitude)
1	Woody Debris	-27.6845, 152.7962
2	Woody Debris	-27.6888, 152.798
3	Woody Debris	-27.6892, 152.7964
4	Woody Debris	-27.6891, 152.7961
5	Woody Debris	-27.6893, 152.7955
6	Woody Debris	-27.6878, 152.7963
7	Woody Debris	-27.6864, 152.7958
8	Woody Debris	-27.6864, 152.7974
9	Hollow Log	-27.6888, 152.7986
10	Hollow Log	-27.6888, 152.7985
11	Hollow Log	-27.6888, 152.798
12	Hollow Log	-27.6894, 152.7968
13	Hollow Log	-27.6891, 152.796
14	Hollow Log	-27.6893, 152.7959
15	Hollow Log	-27.6895, 152.796
16	Hollow Log	-27.6899, 152.7949
17	Hollow Stump	-27.6853, 152.7968
18	Hollow Stump	-27.6853, 152.7969
19	Hollow Stump	-27.6848, 152.7991
20	Hollow Stump	-27.6888, 152.7979
21	Hollow Stump	-27.6893, 152.7975
22	Hollow Stump	-27.6895, 152.7968
23	Hollow Stump	-27.6897, 152.7956
24	Timber Stockpile	-27.6864, 152.7978
25	Rock Pile	-27.6891, 152.7961
26	Rock Pile	-27.6895, 152.796

27	Rock Pile	-27.6891, 152.7956
28	Rock Pile	-27.6886, 152.7955
29	Rock Pile	-27.6867, 152.7966
30	Artificial Debris - Water Tank	-27.6887, 152.7954
31	Artificial Debris - Water Tank	-27.6887, 152.7959
32	Artificial Debris - Water Tank	-27.6887, 152.7959
33	Artificial Debris - Concrete slab	-27.6881, 152.7955
34	Artificial Debris - Concrete slab	-27.6866, 152.796
35	Artificial Debris - Concrete slab	-27.6864, 152.7958
36	Terrestrial Termitaria	-27.6854, 152.7971
37	Terrestrial Termitaria	-27.6855, 152.797
38	Terrestrial Termitaria	-27.6853, 152.7958
39	Terrestrial Termitaria	-27.6843, 152.7962
40	Terrestrial Termitaria	-27.6842, 152.7962
41	Terrestrial Termitaria	-27.6854, 152.7973
42	Terrestrial Termitaria	-27.6851, 152.7988
43	Terrestrial Termitaria	-27.6892, 152.7975
44	Terrestrial Termitaria	-27.6889, 152.7974
45	Terrestrial Termitaria	-27.689, 152.7973
46	Terrestrial Termitaria	-27.6881, 152.7978
47	Terrestrial Termitaria	-27.6885, 152.7975
48	Terrestrial Termitaria	-27.6887, 152.7971
49	Terrestrial Termitaria	-27.6891, 152.7968
50	Terrestrial Termitaria	-27.6893, 152.7964
51	Terrestrial Termitaria	-27.6887, 152.7964
52	Terrestrial Termitaria	-27.6885, 152.7965
53	Terrestrial Termitaria	-27.6881, 152.7968
54	Terrestrial Termitaria	-27.6885, 152.7962
55	Terrestrial Termitaria	-27.6892, 152.7955
56	Terrestrial Termitaria	-27.6885, 152.7957

57	Terrestrial Termitaria	-27.6883, 152.7955
58	Terrestrial Termitaria	-27.6877, 152.7955
59	Terrestrial Termitaria	-27.687, 152.7968
60	Terrestrial Termitaria	-27.6869, 152.7976
61	Terrestrial Termitaria	-27.6867, 152.7977
62	Terrestrial Termitaria	-27.6864, 152.7979
63	Terrestrial Termitaria	-27.686, 152.7972
64	Terrestrial Termitaria with Excavation	-27.6873, 152.7986
65	Terrestrial Termitaria with Excavation	-27.6885, 152.7966
66	Terrestrial Termitaria with Excavation	-27.6888, 152.7961
67	Terrestrial Termitaria with Excavation	-27.687, 152.7968
68	Terrestrial Termitaria with Excavation	-27.6867, 152.7968
69	Active Fire Ant Nest	-27.6829, 152.7985
70	Active Fire Ant Nest	-27.6829, 152.7985
71	Active Fire Ant Nest	-27.6829, 152.7985
72	Active Fire Ant Nest	-27.6829, 152.7985
73	Active Fire Ant Nest	-27.6853, 152.7969



Figure 1: Dense grass



Figure 2: Dense grass



Figure 3: Dense grass



Figure 4: *Lomandra sp.*



Figure 5: *Lomandra sp.*



Figure 6: Lantana *Lantana camara*



Figure 7: Lantana *Lantana camara*



Figure 8: Lantana *Lantana camara*



Figure 9: Corky Passionflower *Passiflora suberosa*



Figure 10: Asparagus Fern *Asparagus aethiopicus*



Figure 11: Ornamental species



Figure 12: Dense leaf litter



Figure 13: Dense leaf litter



Figure 14: Bark exfoliations



Figure 15: Woody debris



Figure 16: Woody debris



Figure 17: Hollow log



Figure 18: Hollow log



Figure 19: Hollow stump



Figure 20: Hollow stump



Figure 21: Timber stockpile



Figure 22: Surface rock



Figure 23: Rock pile



Figure 24: Rock pile



Figure 25: Concrete slab



Figure 26: Artificial debris



Figure 27: Artificial debris



Figure 28: Artificial debris



Figure 29: Terrestrial termitaria



Figure 30: Terrestrial termitaria



Figure 31: Terrestrial termitaria



Figure 32: Terrestrial termitaria with excavation



Figure 33: Terrestrial termitaria with excavation



Figure 34: Macropod scat



Figure 35: Macropod track



Figure 36: Active fire ant nest

3.2 Arboreal Habitat Features

The majority of the clearance area consists predominately of Eucalypt and Acacia woodland (Figure 37 to Figure 42) consisting of trees of varying height, species and density suitable for feeding and nesting resources. The intermittent contiguous canopy structure within some of the vegetation represented (Figure 43), in conjunction with dense vine growth (Figure 44 and Figure 45), may be facilitative of arboreal progression for species such as Common Brushtail Possum *Trichosurus vulpecula* and Squirrel Glider *Petaurus norfolcensis*. A number of trees were in flower at the time of the assessment which may provide further opportunities to transient folivorous and nectivorous bird species.

Hollow-bearing trees, stag trees, and fissures are present in the clearance area (Figure 46 to Figure 55), which may provide habitat opportunities for arboreal mammals, reptiles, and birds. Exfoliating bark on tree trunks (Figure 56) may provide refugial opportunities for reptile species including skinks and geckos.

Several arboreal termite mounds are also present across the site (Figure 57 to Figure 59), with numerous mounds exhibiting excavations (Figure 60 and Figure 61). A number of suitable mounds were located with the potential for use as egg deposition and incubation sites by species such as the Lace Monitor *Varanus varius*, Laughing Kookaburra *Dacelo novaeguineae* (sighted during inspection), and Sacred Kingfisher *Todiramphus sanctus*. Common Brushtail Possums *Trichosurus vulpecula* have also been known to utilise these features for shelter where hollows are not readily available.

A disused shed and animal enclosure located within the clearing area may provide refugial opportunities for several urbanised species, such as the Common Brushtail Possum *Trichosurus vulpecula* and Coastal Carpet Python *Morelia spilota mcdowelli* (Figure 62 and Figure 63).

Multiple avian stick nests were located during the inspection but did not appear active at the time of the survey (Figure 64, Figure 65 and Figure 66). However, further inspections are recommended immediately prior to clearing commencement. A number of avian species were observed utilising the site at the time of the inspection (foraging or perching) these species are presented in Table 4. No Possum dreys were located during the inspection, however, the dense vegetation structure in some areas may have concealed visibility and further inspections are recommended immediately prior to clearing commencement. Possum activity was also evident in the form of scratchings on several tree trunks (Figure 67).

Primary and secondary Koala food trees located in the clearance area and include *Eucalyptus tereticornis*, *E. siderophloia*, *E. crebra*, *E. moluccana*, *E. robusta*, *E. major*, and *Corymbia citriodora*. Evidence was observed to indicate recent use of these trees by koalas with koala scats found during 'drip zone' searches (Figure 68 and Figure 70) and characteristic scratchings also found during trunk investigations (Figure 71 and Figure 72). A Koala habitat values map for the clearance area is presented in Appendix A.

GPS coordinates for all indicative arboreal habitat features are shown in Table 3. Localities for identified arboreal habitat features are presented in Map 2.

Table 3: Localities for identified arboreal habitat features

Number	Habitat Feature	GPS Coordinates (Latitude, Longitude)
1	Dense Vine Growth	-27.6827, 152.7982
2	Dense Vine Growth	-27.6826, 152.7981
3	Dense Vine Growth	-27.6829, 152.7984
4	Dense Vine Growth	-27.6831, 152.7985
5	Dense Vine Growth	-27.6894, 152.7975
6	Hollow Bearing Tree	-27.6859, 152.7969
7	Hollow Bearing Tree	-27.6857, 152.7964
8	Hollow Bearing Tree	-27.6887, 152.7985
9	Hollow Bearing Tree	-27.6893, 152.7978
10	Hollow Bearing Tree	-27.6889, 152.7965
11	Hollow Bearing Tree	-27.6881, 152.7967
12	Hollow Bearing Tree	-27.6885, 152.7962
13	Hollow Bearing Tree	-27.6888, 152.796
14	Hollow Bearing Tree	-27.6894, 152.7956
15	Hollow Bearing Tree	-27.6891, 152.7955
16	Hollow Bearing Tree	-27.6893, 152.7954
17	Hollow Bearing Tree	-27.6887, 152.7958
18	Hollow Bearing Tree	-27.6885, 152.7956
19	Hollow Bearing Tree	-27.6884, 152.7955
20	Hollow Bearing Tree	-27.688, 152.7955
21	Hollow Bearing Tree	-27.6879, 152.7964
22	Hollow Bearing Tree	-27.6871, 152.7964
23	Hollow Bearing Tree	-27.687, 152.7962
24	Hollow Bearing Tree	-27.687, 152.7962
25	Hollow Bearing Tree	-27.6872, 152.7956

26	Hollow Bearing Tree	-27.6869, 152.7959
27	Hollow Bearing Tree	-27.6869, 152.7959
28	Hollow Bearing Tree	-27.6865, 152.7971
29	Hollow Bearing Tree	-27.6865, 152.7973
30	Hollow Bearing Tree	-27.6896, 152.7955
31	Dead Stag	-27.6889, 152.7986
32	Dead Stag	-27.689, 152.7976
33	Dead Stag	-27.6896, 152.7962
34	Dead Stag	-27.6894, 152.7956
35	Dead Stag	-27.6891, 152.7956
36	Dead Stag	-27.6889, 152.7956
37	Dead Stag	-27.6884, 152.7955
38	Dead Stag	-27.6874, 152.7967
39	Dead Stag	-27.6867, 152.7966
40	Dead Stag	-27.6899, 152.7950
41	Dead Stag	-27.6897, 152.7948
42	Fissure	-27.6883, 152.7959
43	Fissure	-27.6893, 152.7958
44	Exfoliating Bark (Arboreal)	-27.6891, 152.7975
45	Exfoliating Bark (Arboreal)	-27.6892, 152.7951
46	Arboreal Termitaria	-27.6857, 152.7966
47	Arboreal Termitaria	-27.6843, 152.7962
48	Arboreal Termitaria	-27.6882, 152.7986
49	Arboreal Termitaria	-27.6889, 152.7985
50	Arboreal Termitaria	-27.689, 152.7979
51	Arboreal Termitaria	-27.6892, 152.7974
52	Arboreal Termitaria	-27.6888, 152.7971
53	Arboreal Termitaria (with excavation)	-27.6855, 152.7969
54	Arboreal Termitaria (with excavation)	-27.6874, 152.7964

55	Bird Nest	-27.6851, 152.7988
56	Bird Nest (x 2)	-27.6872, 152.7987
57	Bird Nest	-27.6876, 152.7964
58	Bird Nest	-27.687, 152.7962
59	Bird Nest (x 2)	-27.6863, 152.7958
60	Bird Nest (x 3)	-27.6865, 152.7974
61	Disused Shed	-27.6855, 152.7961
62	Disused Animal Enclosure	-27.6887, 152.7956
63	Koala Scat	-27.6895, 152.7967
64	Koala Scat	-27.6896, 152.7967
65	Koala Scat	-27.6895, 152.7966
66	Koala Scat	-27.689, 152.7953
67	Koala Scat	-27.6888, 152.7954
68	Koala Scat	-27.6892, 152.7974
69	Koala Scat	-27.687, 152.7962



Figure 37: Site overview



Figure 38: Site overview



Figure 39: Site overview



Figure 40: Site overview



Figure 41: Site overview



Figure 42: Site overview



Figure 43: Contiguous canopy



Figure 44: Dense vine growth



Figure 45: Dense vine growth



Figure 46: Hollow-bearing tree



Figure 47: Hollow-bearing tree

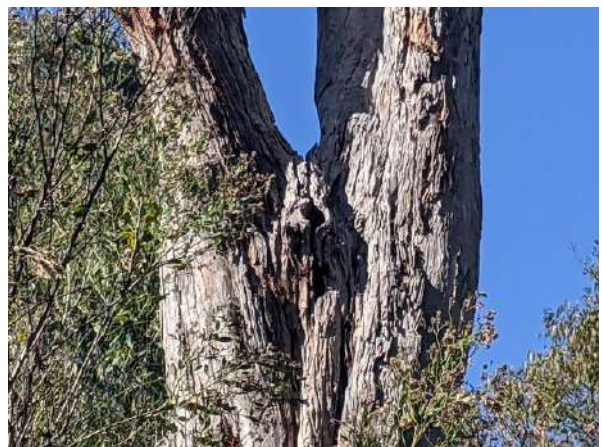


Figure 48: Hollow-bearing tree



Figure 49: Hollow bearing tree



Figure 50: Hollow bearing tree



Figure 51: Stag



Figure 52: Stag



Figure 53: Fissure



Figure 54: Fissure



Figure 55: Fissure



Figure 56: Exfoliating bark



Figure 57: Arboreal termitaria



Figure 58: Arboreal termitaria



Figure 59: Arboreal termitaria



Figure 60: Arboreal termitaria with excavation



Figure 61: Arboreal termitaria with excavation



Figure 62: Disused shed



Figure 63: Disused animal enclosure



Figure 64: Bird nest



Figure 65: Bird nest



Figure 66: Bird nests



Figure 67: Possum scratches



Figure 68: Koala scat



Figure 69: Koala scat



Figure 70: Koala scat



Figure 71: Koala scratching



Figure 72: Koala scratching

Table 4: Arboreal Fauna Species Observed

Number	Common Name and <i>Scientific Name</i>	Conservation Status	
		NCA	EPBC
1	Superb Fairy-wren <i>Malurus ccyaneus</i>	Least Concern	Not Listed
2	Noisy Miner <i>Manorina melanocephala</i>	Least Concern	Not Listed
3	Black-faced Cuckoo-shrike <i>Coracina novaehollandiae</i>	Least Concern	Marine
4	Striated Pardalote <i>Pardalotus striatus</i>	Least Concern	Not Listed
5	Australian Magpie <i>Cracticus tibicen</i>	Least Concern	Not Listed
6	Brown Honeyeater <i>Lichmera indistincta</i>	Least Concern	Not Listed
7	Rainbow Lorikeet <i>Trichoglossus haematodus</i>	Least Concern	Not Listed
8	Noisy Friarbird <i>Philemon corniculatus</i>	Least Concern	Not Listed
9	Galah <i>Eolophus roseicapilla</i>	Least Concern	Not Listed
10	Pied Butcherbird <i>Cracticus nigrogularis</i>	Least Concern	Not Listed
11	Torresian Crow <i>Corvus orru</i>	Least Concern	Not Listed
12	Red-backed Fairy-wren <i>Malurus melanocephalus</i>	Least Concern	Not Listed
13	Welcome Swallow <i>Hirundo neoxena</i>	Least Concern	Marine
14	Laughing Kookaburra <i>Dacelo novaeguineae</i>	Least Concern	Not Listed
15	Pale-headed Rosella <i>Platycercus adscitus</i>	Least Concern	Not Listed
16	Grey Butcherbird <i>Cracticus torquatus</i>	Least Concern	Not Listed

3.3 Aquatic Habitat Features

A dam and artificial drainage are present within the clearance area (Figure 73 to Figure 76). The dam was retaining water at the time of the inspection, but the drainage was not. Native species may exploit the various microhabitats present by such environmental features, particularly during times of rainfall, including the Striped Marsh Frog *Limnodynastes peronii*, Tusked Frog *Adelotus brevis*, Graceful Treefrog *Litoria gracilentia*, and various mammals and birds as a water resource.

GPS coordinates for all indicative aquatic habitat features are shown in Table 5. Localities for identified aquatic habitat features are presented in Map 2.

Table 5: Localities for identified aquatic habitat features

Number	Habitat Feature	GPS Coordinates	
		Latitude	Longitude
1	Dam	-27.6877599	152.7962291
2	Artificial Drainage	-27.6827493	152.7981064
3	Artificial Drainage	-27.6829455	152.7982076



Figure 73: Creek



Figure 74: Dam

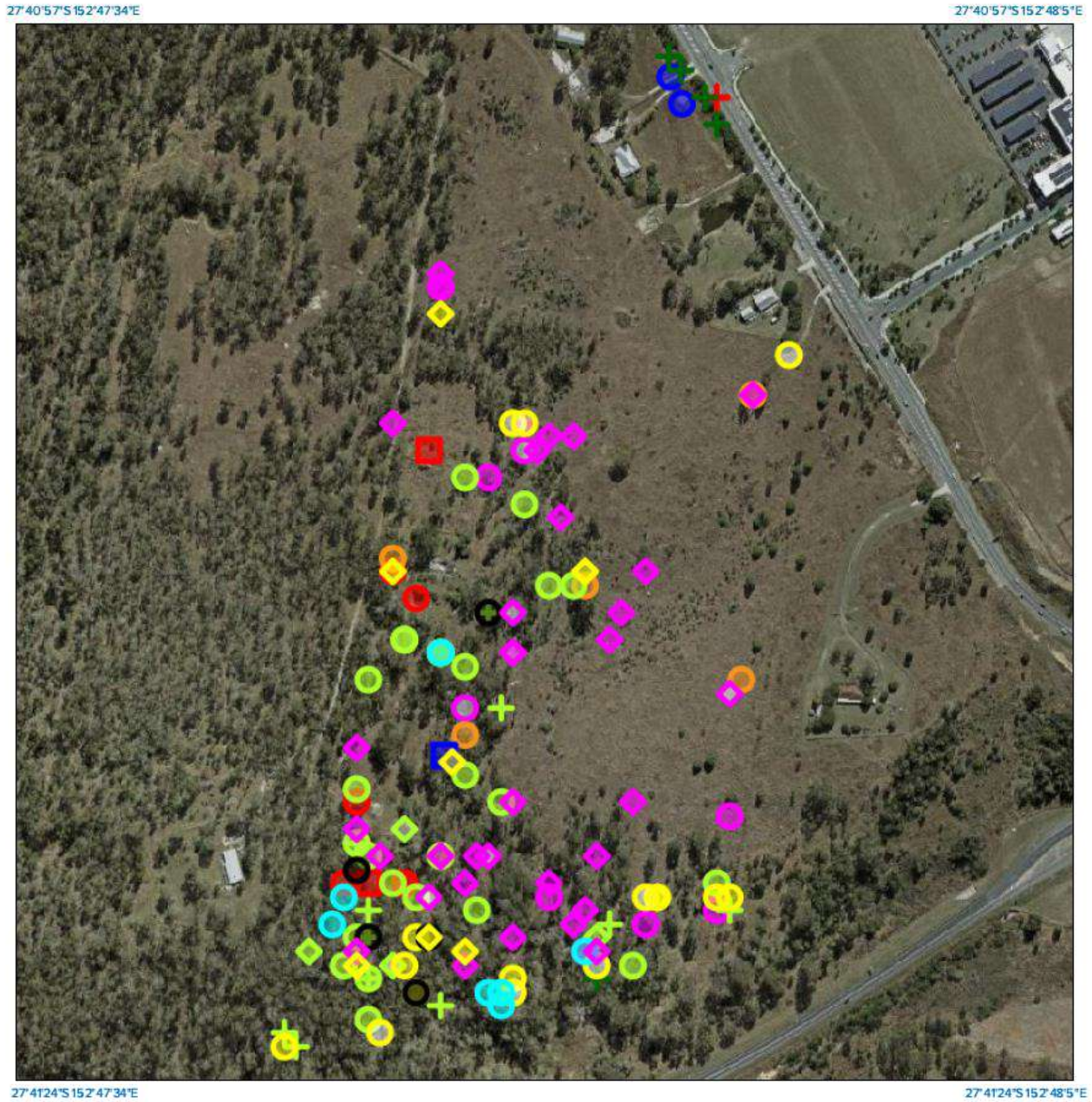


Figure 75: Artificial drainage



Figure 76: Artificial drainage

Map 2: Localities for identified terrestrial, arboreal, and aquatic habitat features
Amory Stages 1 and 2 Habitat Features Map



A product of
Queensland Globe



Legend located on next page

0 100 metres
Scale: 1:4924

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Amory Stages 1 and 2 Habitat Features Map

Legend

POINT-Active Fire Ant Nest trial.csv



POINT-Arboreal Termitaria with Excavation trial.csv



POINT-Arboreal Termitaria trial.csv



POINT-Artificial Debris trial.csv



POINT-Artificial Drainage trial.csv



POINT-Bird Nest trial.csv



POINT-Dam trial.csv



POINT-Dead Stag trial.csv



POINT-Dense Vine Growth trial.csv



POINT-Disused Artificial Structures trial.csv



POINT-Exfoliating Bark trial.csv



POINT-Fissure trial.csv



POINT-Hollow Bearing Tree trial.csv



POINT-Hollow Log trial.csv



POINT-Hollow Stump trial.csv



POINT-Koala Scat trial.csv



POINT-Rock Pile trial.csv



POINT-Terrestrial Termitaria with Excavation trial.csv



POINT-Terrestrial Termitaria trial.csv



POINT-Timber Stockpile trial.csv



POINT-Woody Debris trial.csv



Attribution

Maxar

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3.4 Endangered, Vulnerable and Near Threatened (EVNT) & Special Least Concern (SLC) Species

It is not envisaged that any EVNT or SLC fauna species will be detrimentally impacted by the proposed works. However, eight species identified within the Online EPBC Protected Matters Report (Appendix B) and the Queensland Government Wildlife Online Search Tool (Appendix C) were considered likely or possible to occur within the site and will require further mitigation during clearing activities.

Evidence was found during the site inspection of recent Koala use and the species has previously been recorded in the area. The site contains habitat identified as Core Koala Habitat under the Koala Habitat in South East Queensland mapping sourced from the Queensland Globe online search tool (see Appendix A).

It is advised that dedicated methodologies be employed by a qualified Fauna Spotter specific to the detection of these species prior to vegetation clearing activities.

Table 6: Significant species deemed likely or possible to occur within the clearance survey area

Common Name Scientific Name	Species Information	Likelihood of Occurrence within the Clearance Survey area
Monotremes		
Short-beaked Echidna <i>Tachyglossus aculeatus</i> EPBC: Not Listed NCA: Special Least Concern	Inhabits a broad range of habitat types across Australia where there is a supply of ants or termites. Echidnas will shelter within hollow logs, under bushes and debris (Van Dyck & Strahan 2008).	Possible Suitable feeding resources occur onsite
Mammals		
Koala <i>Phascolarctos cinereus</i> EPBC: Endangered NCA: Endangered	Inhabits a range of open forest and woodland communities which may include any of the following noted food trees: <i>Eucalyptus</i> , <i>Corymbia</i> , <i>Melaleuca</i> , <i>Angophora</i> and <i>Lophostemon</i> .	Likely Known food trees for the transient Koala (<i>Phascolarctos cinereus</i>) occur on the clearance site and the species is well documented within the area.
Grey-headed Flying-fox <i>Pteropus poliocephalus</i> EPBC: Vulnerable NCA: Least Concern	The Grey-headed Flying-Fox roosts in aggregations of various sizes on exposed branches, commonly of emergent trees. Roost sites are typically located near water, such as lakes, rivers or the coast. Habitat includes open forests, woodlands, urban parks and gardens.	Possible Suitable vegetation communities containing both feeding and roosting resources occur on and adjacent to the clearance site.

<p>Spotted-tail Quoll (SE Mainland Population) <i>Dasyurus maculatus maculatus</i></p> <p>EPBC: Endangered NCA: Vulnerable</p>	<p>Currently known from the Granit Belt and Border Ranges though small numbers may occur from Gympie to the QLD border (Curtis <i>et al.</i> 2012). Inhabits vine-forest, wet and dry sclerophyll forests and woodlands containing boulder piles, fallen logs and hollow trees utilised as shelter sites (Curtis <i>et al.</i> 2012).</p>	<p>Possible Preferred habitat type and habitat features present and the species is documented within the area.</p>
<p>Southern Greater Glider <i>Petauroides volans volans</i></p> <p>EPBC: Endangered NCA: Endangered</p>	<p>Largest of the gliders, the Great Glider is found along eastern Australia within a variety of eucalypt dominated forests and tall open woodlands (Lindenmayer 2002)</p>	<p>Possible Preferred habitat type present and the species is documented within the area.</p>
<p>Birds</p>		
<p>Rufous Fantail <i>Rhipidura rufifrons</i></p> <p>EPBC: Migratory and Marine NCA: Special Least Concern</p>	<p>The Rufous Fantail builds a small compact cup nest, of fine grasses bound with spider webs, that is suspended from a tree fork about 5m from the ground. The bottom of the nest is drawn out into a long stem. Both sexes share nest building, incubation and feeding of the young. One or two broods may be raised in a season (Serventy, 1982). Breeding occurs from about September to February with 81% of eggs laid in November-December (Higgins <i>et al.</i> 2001).</p>	<p>Possible Preferred habitat types present, and the species has been observed in the area</p>
<p>Reptiles</p>		
<p>Collared Delma <i>Delma torquata</i></p> <p>EPBC: Vulnerable NCA: Vulnerable</p>	<p>Weathered loose rocks, flattish bedrock outcroppings, logs or mats of leaf litter, or in cracks and crevices among tussock grasses. Lays two eggs around December with hatching in February or March (Curtis <i>et al.</i> 2012)</p>	<p>Possible Preferred habitat type and habitat features present.</p>
<p>Amphibians</p>		
<p>Tusked Frog <i>Adelotus brevis</i></p> <p>EPBC: Not Listed NCA: Vulnerable</p>	<p>Inhabits permanent ponds and streams within rainforests, wet to dry forests and farmland areas (Anstis 2013). Nests are constructed under leaf litter, vegetation or logs at the edge of ponds or stream pools in concealed locations (Anstis 2013).</p>	<p>Possible Habitat conducive to this species is found within the survey area.</p>

4. Fauna Impacts

It is important to consider the existing and future residential developmental areas when investigation potential fauna impacts.

Impacts to fauna, as a result of vegetation clearance, will include the following:

- Loss of trees for foraging, roosting and nesting;
- Loss of hollow-bearing trees for nesting and refuge;
- Loss of habitat and foraging areas for terrestrial species;
- Loss of overall habitat;
- Potential loss of abundance of some local species.

Other impacts may include:

- Injury or death during felling of trees;
- Injury or death from machinery;
- Alteration of nesting, foraging and general activities due to disturbance.

5. Assessment and Conclusion

Overall the site contains medium value refugial opportunities for arboreal and terrestrial fauna species (see Section 3.1 and 3.2). The species expected within the site are likely to primarily reflect common fauna assemblages for the region; however, provisions will be proposed directly for common fauna and species of conservation significance.

The connectivity to adjacent conservation land in the west, in conjunction with sequential clearing methodologies, will aid in the movement of medium to large size fauna such as Koala and Kangaroos. Specific methodologies for these species will be detailed within the Wildlife and Habitat Impact Mitigation Plan (WHIMP).

A number of conclusions and recommendations will be presented in the WHIMP, with the specific intention of providing a comprehensive management structure to facilitate minimal impact to fauna during the clearing of vegetation and subsequent disturbance of habitats.

It is advised that all identified fauna habitats onsite be inspected by a DES approved Fauna Spotter prior to vegetation clearing and all vegetation removal activities be supervised during the clearing process. Terrestrial load reduction activities will be conducted ahead of the clearing front where possible. Fauna captured will be relocated to adjacent habitat consistent with the life history requirements of the species requiring translocation. The directives given by Fauna Spotter Catchers should embrace a “best practice” approach which includes implementation of proven specific management techniques for identified habitat types and compliance with legislation relevant to the activity.

It is recommended that in the event any nests which contain chicks are identified during clearing be left until fledged, and those that are in a construction phase should be dismantled to prevent further nesting activity. Any fertile eggs recovered will require incubation and subsequent rearing for latter release.

6. References

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7. Appendix A: Koala Habitat Values

27°40'40"S 152°47'16"E

27°40'40"S 152°48'14"E



27°41'31"S 152°47'16"E

27°41'31"S 152°48'14"E



A product of

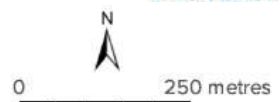
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 Legend

 Attribution

Koala priority area



Core koala habitat area




Identified koala broad-
hectare area



Locally refined koala
habitat area



Roads and tracks

 Motorway

 Highway

 Secondary

 Connector

 Local

 Restricted Access Road

 Mall

 Busway

 Bikeway

 Restricted Access

 Bikeway

 Walkway

 Restricted Access

 Walkway

 Non-vehicular Track

 Track

 Restricted Access Track

 Ferry

 Proposed Thoroughfare

Green bridges



Bridges



Tunnels



[Deprecated] Railway



[Deprecated] Railway
station



Maxar

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8. Appendix B: EPBC Act Protected Matters Report



Australian Government
Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 03-Jul-2024

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar)	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	7
Listed Threatened Species:	50
Listed Migratory Species:	15

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	21
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	2
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	48
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands) [Resource Information]

Ramsar Site Name	Proximity	Buffer Status
Moreton bay	30 - 40km upstream from Ramsar site	In feature area

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community may occur within area	In feature area
Grey box-grey gum wet forest of subtropical eastern Australia	Endangered	Community likely to occur within area	In buffer area only
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area	In feature area
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community may occur within area	In feature area
Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions	Endangered	Community likely to occur within area	In feature area
Swamp Tea-tree (Melaleuca irbyana) Forest of South-east Queensland	Critically Endangered	Community likely to occur within area	In buffer area only
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community may occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour may occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area
Cyclopsitta diophthalma coxeni Coxen's Fig-Parrot [59714]	Critically Endangered	Species or species habitat may occur within area	In feature area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area	In feature area

Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In feature area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to occur within area	In feature area
INSECT			
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area	In feature area
MAMMAL			
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat may occur within area	In feature area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat may occur within area	In feature area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area	In feature area
Petauroides volans Greater Glider (southern and central) [254]	Endangered	Species or species habitat known to occur within area	In feature area
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area	In feature area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
Potorous tridactylus tridactylus Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area	In feature area
PLANT			
Arthraxon hispidus Hairy-joint Grass [9338]	Vulnerable	Species or species habitat may occur within area	In feature area
Bosistoa transversa Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Coleus habrophyllus listed as Plectranthus habrophyllus [91378]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Cupaniopsis shirleyana Wedge-leaf Tuckeroo [3205]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Cupaniopsis tomentella Boonah Tuckeroo [3322]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Dichanthium setosum bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Fontainea venosa [24040]	Vulnerable	Species or species habitat may occur within area	In feature area
Notelaea lloydii Lloyd's Olive [15002]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Notelaea x ipsviciensis listed as Notelaea ipsviciensis Cooneana Olive [93460]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Picris evae Hawkweed [10839]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Planchonella eerwah Shiny-leaved Condoos, Black Plum, Wild Apple [17340]	Endangered	Species or species habitat may occur within area	In feature area
Rhaponticum australe Austral Cornflower, Native Thistle [22647]	Vulnerable	Species or species habitat may occur within area	In feature area
Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rhodomyrtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat may occur within area	In feature area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area	In feature area
REPTILE			
Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Furina dunmali Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area	In feature area
Hemiaspis damelii Grey Snake [1179]	Endangered	Species or species habitat likely to occur within area	In feature area
Listed Migratory Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Commonwealth Lands [\[Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
Defence		
Defence - AMBERLEY - AP90 SMALL ARMS RANGE (PURGA) [31817]	QLD	In buffer area only

Listed Marine Species [\[Resource Information \]](#)

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Pterodroma cervicalis White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat may occur within area overfly marine area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Stewartdale	Nature Refuge	QLD	In buffer area only
White Rock	Conservation Park	QLD	In buffer area only

EPBC Act Referrals					[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status	
AW Bidco 6 Pty Ltd - Urban Development Project	2023/09690		Referral Decision	In buffer area only	
Barrams Road Residential Development	2021/9005		Post-Approval	In buffer area only	
Bryants Road Residential Development	2023/09484		Assessment	In buffer area only	
Greater Brisbane Greyhound Centre	2022/09252		Completed	In buffer area only	
Greater Brisbane Greyhound Centre	2022/09321		Completed	In buffer area only	
Redbank Plains Industrial Development	2023/09705		Assessment	In buffer area only	

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Ripley Residential Development Project	2024/09865		Referral Decision	In buffer area only
Ripley Valley PDA Providence East and South	2018/8347		Post-Approval	In buffer area only
Ripley View Residential Subdivision	2020/8615		Post-Approval	In buffer area only
South Ripley Residential Development	2023/09656		Assessment	In buffer area only
Watsons Road, South Ripley - Residential Development	2024/09861		Referral Decision	In buffer area only
Controlled action				
AV JENNINGS PTY LTD - Coleman Road, South Ripley - Residential Development	2021/9061	Controlled Action	Assessment Approach	In buffer area only
Casino Ipswich Pipeline	2007/3877	Controlled Action	Completed	In feature area
CROCODILE 03 Military Training Exercise	2002/888	Controlled Action	Post-Approval	In buffer area only
Cumner Road mixed use subdivision, Whiterock, Ripley Valley, Qld	2014/7388	Controlled Action	Post-Approval	In buffer area only
ECCO Ripley Residential Development, Ipswich, QLD	2015/7513	Controlled Action	Post-Approval	In feature area
Grampian Drive Deebing Heights Residential Development, Qld	2015/7628	Controlled Action	Post-Approval	In buffer area only
Hayfield School Site	2021/9070	Controlled Action	Assessment Approach	In buffer area only
Paradise Waters Residential Estate, Gampian Drive, Deebing Heights	2013/6864	Controlled Action	Post-Approval	In buffer area only
Providence West Residential Development	2020/8698	Controlled Action	Further Information Request	In feature area
Residential development, Rawlings Road, Ripley Valley	2016/7723	Controlled Action	Post-Approval	In buffer area only
Residential Development, Ripley	2020/8791	Controlled Action	Assessment Approach	In feature area
Ripley Road Residential Development	2019/8539	Controlled Action	Post-Approval	In buffer area only
Ripley Road residential development, Ripley Valley, Qld	2017/8095	Controlled Action	Post-Approval	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Southern Regional Water Pipeline	2006/2593	Controlled Action	Post-Approval	In buffer area only
Not controlled action				
Blackstone Power Station	2012/6252	Not Controlled Action	Completed	In buffer area only
BrisWest Holdings - Release 5 Operational Works	2021/9086	Not Controlled Action	Completed	In buffer area only
Daleys Road Residential Development	2010/5638	Not Controlled Action	Completed	In buffer area only
Fernbrooke Ridge residential estate development - Balance Land, Redbank Plains, Qld	2013/6818	Not Controlled Action	Completed	In buffer area only
Grampian Drive residential development, Deebing Heights, Qld	2016/7634	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Inland Rail Gowrie to Kagaru Geotechnical Project, QLD	2018/8263	Not Controlled Action	Completed	In buffer area only
Master planned residential community, Ripley Valley, QLD	2014/7325	Not Controlled Action	Completed	In buffer area only
Northern Link Parallel Road Tunnels Project	2007/3824	Not Controlled Action	Completed	In buffer area only
REMONDIS Waste to Energy Facility	2020/8806	Not Controlled Action	Completed	In buffer area only
Removal of Grey-headed Flying-fox Habitat	2005/2137	Not Controlled Action	Completed	In feature area
Residential/Commercial development Binnies Road, Ripley, Qld	2016/7669	Not Controlled Action	Completed	In buffer area only
Residential Subdivision on Monterey Road, Ripley	2012/6644	Not Controlled Action	Completed	In buffer area only
Ripley Town Centre, Ipswich, QLD	2015/7471	Not Controlled Action	Completed	In feature area
South West Transport Corridor	2006/2547	Not Controlled Action	Completed	In feature area
Swanbank Gas Fired Combined Cycle Plant	2008/4087	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Swanbank Waste Management Facility Stage 1B extension Area, Qld	2015/7581	Not Controlled Action	Completed	In buffer area only
To develop the Paradise Heights residential subdivision, QLD	2014/7310	Not Controlled Action	Completed	In buffer area only
Underground Bus and Train Project, Brisbane	2013/7106	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
168 Lot Residential and Commercial Development at Deebing Heights	2009/4818	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Construction & Operation 275/330kV Transmission Line	2006/2820	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Cross River Rail	2010/5427	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Paper Mill	2003/915	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Bioregional Assessments			[Resource Information]	
SubRegion	BioRegion	Website	Buffer Status	
Clarence-Moreton	Clarence-Moreton	BA website	In feature area	

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [Office of Environment and Heritage, New South Wales](#)
- [Department of Environment and Primary Industries, Victoria](#)
- [Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [Department of Environment, Water and Natural Resources, South Australia](#)
- [Department of Land and Resource Management, Northern Territory](#)
- [Department of Environmental and Heritage Protection, Queensland](#)
- [Department of Parks and Wildlife, Western Australia](#)
- [Environment and Planning Directorate, ACT](#)
- [Birdlife Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- [Natural history museums of Australia](#)
- [Museum Victoria](#)
- [Australian Museum](#)
- [South Australian Museum](#)
- [Queensland Museum](#)
- [Online Zoological Collections of Australian Museums](#)
- [Queensland Herbarium](#)
- [National Herbarium of NSW](#)
- [Royal Botanic Gardens and National Herbarium of Victoria](#)
- [Tasmanian Herbarium](#)
- [State Herbarium of South Australia](#)
- [Northern Territory Herbarium](#)
- [Western Australian Herbarium](#)
- [Australian National Herbarium, Canberra](#)
- [University of New England](#)
- [Ocean Biogeographic Information System](#)
- [Australian Government, Department of Defence Forestry Corporation, NSW](#)
- [Geoscience Australia](#)
- [CSIRO](#)
- [Australian Tropical Herbarium, Cairns](#)
- [eBird Australia](#)
- [Australian Government – Australian Antarctic Data Centre](#)
- [Museum and Art Gallery of the Northern Territory](#)
- [Australian Government National Environmental Science Program](#)
- [Australian Institute of Marine Science](#)
- [Reef Life Survey Australia](#)
- [American Museum of Natural History](#)
- [Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact us](#) page.

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9. Appendix C: Wildlife Online Extract



**Queensland
Government**

WildNet species list

Search Criteria: Species List for a Specified Point
Species: Animals
Type: Native
Queensland status: All
Records: All
Date: All
Latitude: -27.6848
Longitude: 152.7979
Distance: 5
Email: projects@qfc.com.au
Date submitted: Wednesday 03 Jul 2024 15:29:01
Date extracted: Wednesday 03 Jul 2024 15:30:02

The number of records retrieved = 322

Disclaimer

Information presented on this product is distributed by the Queensland Government as an information source only. While every care is taken to ensure the accuracy of this data, the State of Queensland makes no statements, representations or warranties about the accuracy, reliability, completeness or suitability of any information contained in this product.

The State of Queensland disclaims all responsibility for information contained in this product and all liability (including liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

Information about your Species lists request is logged for quality assurance, user support and product enhancement purposes only.

The information provided should be appropriately acknowledged as being derived from WildNet database when it is used. As the WildNet Program is still in a process of collating and vetting data, it is possible the information given is not complete. Go to the WildNet database webpage (<https://www.qld.gov.au/environment/plants-animals/species-information/wildnet>) to find out more about WildNet and where to access other WildNet information products approved for publication. Feedback about WildNet species lists should be emailed to wildlife.online@des.qld.gov.au.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Hylidae	<i>Litoria balatus</i>	slender bleating treefrog		C		5
animals	amphibians	Hylidae	<i>Litoria caerulea</i>	common green treefrog		C		15
animals	amphibians	Hylidae	<i>Litoria fallax</i>	eastern sedgefrog		C		9
animals	amphibians	Hylidae	<i>Litoria gracilentata</i>	graceful treefrog		C		6
animals	amphibians	Hylidae	<i>Litoria latopalmata</i>	broad palmed rocketfrog		C		2
animals	amphibians	Hylidae	<i>Litoria nasuta</i>	striped rocketfrog		C		4
animals	amphibians	Hylidae	<i>Litoria rubella</i>	ruddy treefrog		C		4
animals	amphibians	Hylidae	<i>Litoria wilcoxii</i>	eastern stony creek frog		C		2
animals	amphibians	Limnodynastidae	<i>Limnodynastes peronii</i>	striped marshfrog		C		7
animals	amphibians	Limnodynastidae	<i>Limnodynastes terraereginae</i>	scarlet sided pobblebonk		C		8
animals	amphibians	Limnodynastidae	<i>Platyplectrum ornatum</i>	ornate burrowing frog		C		7
animals	amphibians	Myobatrachidae	<i>Crinia parinsignifera</i>	beeping froglet		C		9
animals	amphibians	Myobatrachidae	<i>Crinia signifera</i>	clicking froglet		C		2
animals	amphibians	Myobatrachidae	<i>Pseudophryne coriacea</i>	red backed broodfrog		C		1
animals	amphibians	Myobatrachidae	<i>Pseudophryne raveni</i>	copper backed broodfrog		C		4
animals	amphibians	Myobatrachidae	<i>Uperoleia fusca</i>	dusky gungan		C		3
animals	birds	Acanthizidae	<i>Acanthiza chrysorrhoa</i>	yellow-rumped thornbill		C		7
animals	birds	Acanthizidae	<i>Acanthiza lineata</i>	striated thornbill		C		1
animals	birds	Acanthizidae	<i>Acanthiza nana</i>	yellow thornbill		C		1
animals	birds	Acanthizidae	<i>Acanthiza pusilla</i>	brown thornbill		C		4
animals	birds	Acanthizidae	<i>Acanthiza reguloides</i>	buff-rumped thornbill		C		6
animals	birds	Acanthizidae	<i>Gerygone mouki</i>	brown gerygone		C		2
animals	birds	Acanthizidae	<i>Gerygone olivacea</i>	white-throated gerygone		C		18
animals	birds	Acanthizidae	<i>Pyrrholaemus sagittatus</i>	speckled warbler		C		16
animals	birds	Acanthizidae	<i>Sericornis frontalis</i>	white-browed scrubwren		C		9
animals	birds	Acanthizidae	<i>Smicromis brevirostris</i>	weebill		C		12
animals	birds	Accipitridae	<i>Accipiter cirrocephalus</i>	collared sparrowhawk		C		2
animals	birds	Accipitridae	<i>Accipiter fasciatus</i>	brown goshawk		C		9
animals	birds	Accipitridae	<i>Accipiter novaehollandiae</i>	grey goshawk		C		1
animals	birds	Accipitridae	<i>Aquila audax</i>	wedge-tailed eagle		C		22
animals	birds	Accipitridae	<i>Aviceda subcristata</i>	Pacific baza		C		1
animals	birds	Accipitridae	<i>Circus approximans</i>	swamp harrier		C		3
animals	birds	Accipitridae	<i>Elanus axillaris</i>	black-shouldered kite		C		11
animals	birds	Accipitridae	<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle		C		15
animals	birds	Accipitridae	<i>Haliastur indus</i>	brahminy kite		C		2
animals	birds	Accipitridae	<i>Haliastur sphenurus</i>	whistling kite		C		5
animals	birds	Accipitridae	<i>Lophoictinia isura</i>	square-tailed kite		C		1
animals	birds	Accipitridae	<i>Milvus migrans</i>	black kite		C		1
animals	birds	Acrocephalidae	<i>Acrocephalus australis</i>	Australian reed-warbler		C		11
animals	birds	Aegothelidae	<i>Aegotheles cristatus</i>	Australian owl-nightjar		C		6
animals	birds	Alcedinidae	<i>Ceyx azureus</i>	azure kingfisher		C		10
animals	birds	Alcedinidae	<i>Dacelo novaeguineae</i>	laughing kookaburra		C		37
animals	birds	Alcedinidae	<i>Todiramphus macleayii</i>	forest kingfisher		C		6
animals	birds	Alcedinidae	<i>Todiramphus sanctus</i>	sacred kingfisher		C		13
animals	birds	Anatidae	<i>Anas castanea</i>	chestnut teal		C		5
animals	birds	Anatidae	<i>Anas gracilis</i>	grey teal		C		13

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Anatidae	<i>Anas superciliosa</i>	Pacific black duck		C		28
animals	birds	Anatidae	<i>Aythya australis</i>	hardhead		C		17
animals	birds	Anatidae	<i>Chenonetta jubata</i>	Australian wood duck		C		38
animals	birds	Anatidae	<i>Cygnus atratus</i>	black swan		C		17
animals	birds	Anatidae	<i>Dendrocygna arcuata</i>	wandering whistling-duck		C		1
animals	birds	Anatidae	<i>Dendrocygna eytoni</i>	plumed whistling-duck		C		2
animals	birds	Anatidae	<i>Malacorhynchus membranaceus</i>	pink-eared duck		C		1
animals	birds	Anatidae	<i>Spatula rhynchotis</i>	Australasian shoveler		C		2
animals	birds	Anatidae	<i>Tadorna tadornoides</i>	Australian shelduck		C		1
animals	birds	Anhingidae	<i>Anhinga novaehollandiae</i>	Australasian darter		C		16
animals	birds	Anseranatidae	<i>Anseranas semipalmata</i>	magpie goose		C		3
animals	birds	Apodidae	<i>Hirundapus caudacutus</i>	white-throated needletail		V	V	5
animals	birds	Ardeidae	<i>Ardea alba modesta</i>	eastern great egret		C		8
animals	birds	Ardeidae	<i>Ardea intermedia</i>	intermediate egret		C		7
animals	birds	Ardeidae	<i>Ardea pacifica</i>	white-necked heron		C		8
animals	birds	Ardeidae	<i>Bubulcus ibis</i>	cattle egret		C		23
animals	birds	Ardeidae	<i>Egretta garzetta</i>	little egret		C		3
animals	birds	Ardeidae	<i>Egretta novaehollandiae</i>	white-faced heron		C		28
animals	birds	Ardeidae	<i>Nycticorax caledonicus</i>	nankeen night-heron		C		1
animals	birds	Artamidae	<i>Artamus cyanopterus</i>	dusky woodswallow		C		2
animals	birds	Artamidae	<i>Artamus leucorhynchus</i>	white-breasted woodswallow		C		5
animals	birds	Artamidae	<i>Artamus superciliosus</i>	white-browed woodswallow		C		1
animals	birds	Artamidae	<i>Cracticus nigrogularis</i>	piebald butcherbird		C		43
animals	birds	Artamidae	<i>Cracticus sp.</i>			C		3
animals	birds	Artamidae	<i>Cracticus torquatus</i>	grey butcherbird		C		28
animals	birds	Artamidae	<i>Gymnorhina tibicen</i>	Australian magpie		C		57
animals	birds	Artamidae	<i>Strepera graculina</i>	piebald currawong		C		16
animals	birds	Burhinidae	<i>Burhinus grallarius</i>	bush stone-curlew		C		1
animals	birds	Cacatuidae	<i>Cacatua galerita</i>	sulphur-crested cockatoo		C		21
animals	birds	Cacatuidae	<i>Cacatua sanguinea</i>	little corella		C		5
animals	birds	Cacatuidae	<i>Calyptorhynchus banksii</i>	red-tailed black-cockatoo		C		1
animals	birds	Cacatuidae	<i>Eolophus roseicapilla</i>	galah		C		18
animals	birds	Campephagidae	<i>Coracina novaehollandiae</i>	black-faced cuckoo-shrike		C		35
animals	birds	Campephagidae	<i>Coracina papuensis</i>	white-bellied cuckoo-shrike		C		2
animals	birds	Campephagidae	<i>Edolisoma tenuirostre</i>	common cicadabird		C		9
animals	birds	Campephagidae	<i>Lalage leucomela</i>	varied triller		C		2
animals	birds	Campephagidae	<i>Lalage tricolor</i>	white-winged triller		C		1
animals	birds	Charadriidae	<i>Elseya melanops</i>	black-fronted dotterel		C		11
animals	birds	Charadriidae	<i>Erythronyx cinctus</i>	red-kneed dotterel		C		4
animals	birds	Charadriidae	<i>Vanellus miles</i>	masked lapwing		C		3
animals	birds	Charadriidae	<i>Vanellus miles novaehollandiae</i>	masked lapwing (southern subspecies)		C		31
animals	birds	Ciconiidae	<i>Ephippiorhynchus asiaticus</i>	black-necked stork		C		10
animals	birds	Cinlosomatidae	<i>Cinlosoma punctatum</i>	spotted quail-thrush		C		4
animals	birds	Cisticolidae	<i>Cisticola exilis</i>	golden-headed cisticola		C		25
animals	birds	Climacteridae	<i>Cormobates leucophaea</i>	white-throated treecreeper		C		1
animals	birds	Climacteridae	<i>Cormobates leucophaea metastasis</i>	white-throated treecreeper (southern)		C		13

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Columbidae	<i>Chalcophaps longirostris</i>	Pacific emerald dove		C		1
animals	birds	Columbidae	<i>Geopelia cuneata</i>	diamond dove		C		1
animals	birds	Columbidae	<i>Geopelia humeralis</i>	bar-shouldered dove		C		14
animals	birds	Columbidae	<i>Geopelia placida</i>	peaceful dove		C		14
animals	birds	Columbidae	<i>Lopholaimus antarcticus</i>	topknot pigeon		C		2
animals	birds	Columbidae	<i>Macropygia phasianella</i>	brown cuckoo-dove		C		6
animals	birds	Columbidae	<i>Ocyphaps lophotes</i>	crested pigeon		C		27
animals	birds	Columbidae	<i>Phaps chalcoptera</i>	common bronzewing		C		7
animals	birds	Coraciidae	<i>Eurystomus orientalis</i>	dollarbird		C		8
animals	birds	Corvidae	<i>Corvus orru</i>	Torresian crow		C		59
animals	birds	Cuculidae	<i>Cacomantis flabelliformis</i>	fan-tailed cuckoo		C		16
animals	birds	Cuculidae	<i>Cacomantis pallidus</i>	pallid cuckoo		C		1
animals	birds	Cuculidae	<i>Cacomantis variolosus</i>	brush cuckoo		C		2
animals	birds	Cuculidae	<i>Centropus phasianinus</i>	pheasant coucal		C		6
animals	birds	Cuculidae	<i>Chalcites basalis</i>	Horsfield's bronze-cuckoo		C		6
animals	birds	Cuculidae	<i>Chalcites lucidus</i>	shining bronze-cuckoo		C		3
animals	birds	Cuculidae	<i>Cuculus optatus</i>	oriental cuckoo		SL		1
animals	birds	Cuculidae	<i>Eudynamis orientalis</i>	eastern koel		C		10
animals	birds	Cuculidae	<i>Scythrops novaehollandiae</i>	channel-billed cuckoo		C		9
animals	birds	Dicaeidae	<i>Dicaeum hirundinaceum</i>	mistletoebird		C		24
animals	birds	Dicruridae	<i>Dicrurus bracteatus</i>	spangled drongo		C		13
animals	birds	Estrildidae	<i>Lonchura castaneothorax</i>	chestnut-breasted mannikin		C		10
animals	birds	Estrildidae	<i>Neochmia temporalis</i>	red-browed finch		C		16
animals	birds	Estrildidae	<i>Taeniopygia bichenovii</i>	double-barred finch		C		24
animals	birds	Eurostopodidae	<i>Eurostopodus mystacalis</i>	white-throated nightjar		C		4
animals	birds	Falconidae	<i>Falco berigora</i>	brown falcon		C		3
animals	birds	Falconidae	<i>Falco cenchroides</i>	nankeen kestrel		C		16
animals	birds	Falconidae	<i>Falco longipennis</i>	Australian hobby		C		2
animals	birds	Falconidae	<i>Falco peregrinus macropus</i>	Australian peregrine falcon		C		6
animals	birds	Hirundinidae	<i>Cheramoeca leucosterna</i>	white-backed swallow		C		3
animals	birds	Hirundinidae	<i>Hirundo neoxena</i>	welcome swallow		C		27
animals	birds	Hirundinidae	<i>Petrochelidon ariel</i>	fairy martin		C		11
animals	birds	Hirundinidae	<i>Petrochelidon nigricans</i>	tree martin		C		9
animals	birds	Jacaniidae	<i>Irediparra gallinacea</i>	comb-crested jacana		C		8
animals	birds	Laridae	<i>Chlidonias hybrida</i>	whiskered tern		C		1
animals	birds	Laridae	<i>Chroicocephalus novaehollandiae</i>	silver gull		C		1
animals	birds	Locustellidae	<i>Cincloramphus cruralis</i>	brown songlark		C		2
animals	birds	Locustellidae	<i>Cincloramphus timoriensis</i>	tawny grassbird		C		7
animals	birds	Locustellidae	<i>Poodytes gramineus</i>	little grassbird		C		5
animals	birds	Maluridae	<i>Malurus cyaneus</i>	superb fairy-wren		C		32
animals	birds	Maluridae	<i>Malurus lamberti</i>	variegated fairy-wren		C		20
animals	birds	Maluridae	<i>Malurus melanocephalus</i>	red-backed fairy-wren		C		32
animals	birds	Megapodiidae	<i>Alectura lathamii</i>	Australian brush-turkey		C		3
animals	birds	Meliphagidae	<i>Acanthorhynchus tenuirostris</i>	eastern spinebill		C		6
animals	birds	Meliphagidae	<i>Anthochaera chrysoptera</i>	little wattlebird		C		2
animals	birds	Meliphagidae	<i>Caligavis chrysops</i>	yellow-faced honeyeater		C		23

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Meliphagidae	<i>Entomyzon cyanotis</i>	blue-faced honeyeater		C		13
animals	birds	Meliphagidae	<i>Lichmera indistincta</i>	brown honeyeater		C		40
animals	birds	Meliphagidae	<i>Manorina melanocephala</i>	noisy miner		C		46
animals	birds	Meliphagidae	<i>Meliphaga lewinii</i>	Lewin's honeyeater		C		7
animals	birds	Meliphagidae	<i>Melithreptus albogularis</i>	white-throated honeyeater		C		14
animals	birds	Meliphagidae	<i>Melithreptus gularis</i>	black-chinned honeyeater		C		7
animals	birds	Meliphagidae	<i>Myzomela sanguinolenta</i>	scarlet honeyeater		C		29
animals	birds	Meliphagidae	<i>Philemon citreogularis</i>	little friarbird		C		12
animals	birds	Meliphagidae	<i>Philemon corniculatus</i>	noisy friarbird		C		33
animals	birds	Meliphagidae	<i>Plectorhyncha lanceolata</i>	striped honeyeater		C		4
animals	birds	Meliphagidae	<i>Ptilotula fusca</i>	fuscous honeyeater		C		11
animals	birds	Meropidae	<i>Merops ornatus</i>	rainbow bee-eater		C		26
animals	birds	Monarchidae	<i>Grallina cyanoleuca</i>	magpie-lark		C		42
animals	birds	Monarchidae	<i>Monarcha melanopsis</i>	black-faced monarch		SL		2
animals	birds	Monarchidae	<i>Myiagra rubecula</i>	leaden flycatcher		C		6
animals	birds	Monarchidae	<i>Symphysiachrus trivirgatus</i>	spectacled monarch		SL		2
animals	birds	Motacillidae	<i>Anthus novaeseelandiae</i>	Australasian pipit		C		8
animals	birds	Neosittidae	<i>Daphoenositta chrysoptera</i>	varied sittella		C		11
animals	birds	Oriolidae	<i>Oriolus sagittatus</i>	olive-backed oriole		C		8
animals	birds	Oriolidae	<i>Sphecotheres vieillotii</i>	Australasian figbird		C		12
animals	birds	Pachycephalidae	<i>Colluricincla harmonica</i>	grey shrike-thrush		C		19
animals	birds	Pachycephalidae	<i>Colluricincla megarhyncha</i>	little shrike-thrush		C		3
animals	birds	Pachycephalidae	<i>Pachycephala pectoralis</i>	golden whistler		C		18
animals	birds	Pachycephalidae	<i>Pachycephala rufiventris</i>	rufous whistler		C		24
animals	birds	Pardalotidae	<i>Pardalotus punctatus</i>	spotted pardalote		C		11
animals	birds	Pardalotidae	<i>Pardalotus striatus</i>	striated pardalote		C		44
animals	birds	Pelecanidae	<i>Pelecanus conspicillatus</i>	Australian pelican		C		19
animals	birds	Petroicidae	<i>Eopsaltria australis</i>	eastern yellow robin		C		18
animals	birds	Petroicidae	<i>Microeca fascians</i>	jacky winter		C		7
animals	birds	Petroicidae	<i>Petroica rosea</i>	rose robin		C		13
animals	birds	Phaethontidae	<i>Phaethon lepturus</i>	white-tailed tropicbird		SL		1/1
animals	birds	Phalacrocoracidae	<i>Microcarbo melanoleucos</i>	little pied cormorant		C		24
animals	birds	Phalacrocoracidae	<i>Phalacrocorax carbo</i>	great cormorant		C		7
animals	birds	Phalacrocoracidae	<i>Phalacrocorax sulcirostris</i>	little black cormorant		C		20
animals	birds	Phalacrocoracidae	<i>Phalacrocorax varius</i>	pied cormorant		C		11
animals	birds	Phasianidae	<i>Coturnix pectoralis</i>	stubble quail		C		2
animals	birds	Phasianidae	<i>Synoicus ypsilophorus</i>	brown quail		C		7
animals	birds	Podargidae	<i>Podargus strigoides</i>	tawny frogmouth		C		16
animals	birds	Podicipedidae	<i>Podiceps cristatus</i>	great crested grebe		C		9
animals	birds	Podicipedidae	<i>Tachybaptus novaehollandiae</i>	Australasian grebe		C		20
animals	birds	Pomatostomidae	<i>Pomatostomus temporalis</i>	grey-crowned babbler		C		7
animals	birds	Psittaculidae	<i>Alisterus scapularis</i>	Australian king-parrot		C		4
animals	birds	Psittaculidae	<i>Barnardius zonarius</i>	Australian ringneck		C		5
animals	birds	Psittaculidae	<i>Glossopsitta concinna</i>	musk lorikeet		C		1
animals	birds	Psittaculidae	<i>Melopsittacus undulatus</i>	budgerigar		C		2
animals	birds	Psittaculidae	<i>Parvipsitta pusilla</i>	little lorikeet		C		21

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animals	birds	Psittaculidae	<i>Platycercus adscitus</i>	pale-headed rosella	C			33
animals	birds	Psittaculidae	<i>Platycercus adscitus palliceps</i>	pale-headed rosella (southern form)	C			1
animals	birds	Psittaculidae	<i>Platycercus eximius</i>	eastern rosella	C			1
animals	birds	Psittaculidae	<i>Trichoglossus chlorolepidotus</i>	scaly-breasted lorikeet	C			44
animals	birds	Psittaculidae	<i>Trichoglossus moluccanus</i>	rainbow lorikeet	C			34
animals	birds	Psophodidae	<i>Psophodes olivaceus</i>	eastern whipbird	C			13
animals	birds	Ptilonorhynchidae	<i>Chlamydera maculata</i>	spotted bowerbird	C			3
animals	birds	Ptilonorhynchidae	<i>Sericulus chrysocephalus</i>	regent bowerbird	C			3
animals	birds	Rallidae	<i>Amauromis moluccana</i>	pale-vented bush-hen	C			1
animals	birds	Rallidae	<i>Fulica atra</i>	Eurasian coot	C			18
animals	birds	Rallidae	<i>Gallinula tenebrosa</i>	dusky moorhen	C			23
animals	birds	Rallidae	<i>Gallirallus philippensis</i>	buff-banded rail	C			5
animals	birds	Rallidae	<i>Lewinia pectoralis</i>	Lewin's rail	C			4
animals	birds	Rallidae	<i>Porphyrio melanotus</i>	purple swamphen	C			17
animals	birds	Rallidae	<i>Porzana fluminea</i>	Australian spotted crane	C			6
animals	birds	Rallidae	<i>Zapornia pusilla</i>	Baillon's crane	C			13
animals	birds	Rallidae	<i>Zapornia tabuensis</i>	spotless crane	C			6
animals	birds	Recurvirostridae	<i>Himantopus leucocephalus</i>	pieb stilt	C			13
animals	birds	Rhipiduridae	<i>Rhipidura albiscapa</i>	grey fantail	C			31
animals	birds	Rhipiduridae	<i>Rhipidura leucophrys</i>	willie wagtail	C			41
animals	birds	Rhipiduridae	<i>Rhipidura rufifrons</i>	rufous fantail	SL			4
animals	birds	Rostratulidae	<i>Rostratula australis</i>	Australian painted-snipe	E	E		7
animals	birds	Scolopacidae	<i>Actitis hypoleucos</i>	common sandpiper	SL			9
animals	birds	Scolopacidae	<i>Calidris acuminata</i>	sharp-tailed sandpiper	SL	V		1
animals	birds	Scolopacidae	<i>Calidris melanotos</i>	pectoral sandpiper	SL			1
animals	birds	Scolopacidae	<i>Gallinago hardwickii</i>	Latham's snipe	SL	V		6
animals	birds	Scolopacidae	<i>Limosa limosa</i>	black-tailed godwit	SL	E		4
animals	birds	Scolopacidae	<i>Tringa stagnatilis</i>	marsh sandpiper	SL			1
animals	birds	Strigidae	<i>Ninox boobook</i>	southern boobook	C			7
animals	birds	Strigidae	<i>Ninox strenua</i>	powerful owl	V			1
animals	birds	Threskiornithidae	<i>Platalea flavipes</i>	yellow-billed spoonbill	C			8
animals	birds	Threskiornithidae	<i>Platalea regia</i>	royal spoonbill	C			12
animals	birds	Threskiornithidae	<i>Plegadis falcinellus</i>	glossy ibis	SL			2
animals	birds	Threskiornithidae	<i>Threskiornis molucca</i>	Australian white ibis	C			9
animals	birds	Threskiornithidae	<i>Threskiornis spinicollis</i>	straw-necked ibis	C			18
animals	birds	Turnicidae	<i>Turnix maculosus</i>	red-backed button-quail	C			2
animals	birds	Turnicidae	<i>Turnix varius</i>	painted button-quail	C			5
animals	birds	Tytonidae	<i>Tyto javanica</i>	eastern barn owl	C			3
animals	birds	Zosteropidae	<i>Zosterops lateralis</i>	silveryeye	C			36
animals	insects	Cordulephyidae	<i>Cordulephya pygmaea</i>	common shutwing				2
animals	insects	Lycaenidae	<i>Candalides margarita margarita</i>	trident pencilled-blue				1
animals	insects	Lycaenidae	<i>Psychonotis caelius taygetus</i>	small green-banded blue				1
animals	insects	Nymphalidae	<i>Acraea andromacha andromacha</i>	glasswing				2
animals	insects	Nymphalidae	<i>Charaxes sempronius sempronius</i>	tailed emperor				2
animals	insects	Nymphalidae	<i>Danaus petilia</i>	lesser wanderer				4
animals	insects	Nymphalidae	<i>Danaus sp.</i>					1

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animals	insects	Nymphalidae	<i>Euploea corinna</i>	common crow				4
animals	insects	Nymphalidae	<i>Junonia villida villida</i>	meadow argus				2
animals	insects	Nymphalidae	<i>Melanitis leda bankia</i>	evening brown				3
animals	insects	Nymphalidae	<i>Tirumala hamata hamata</i>	blue tiger				1
animals	insects	Papilionidae	<i>Graphium choredon</i>	blue triangle				2
animals	insects	Papilionidae	<i>Papilio aegaeus aegaeus</i>	orchard swallowtail (Australian subspecies)				2
animals	insects	Pieridae	<i>Catopsilia pomona</i>	lemon migrant				2
animals	insects	Pieridae	<i>Cepora perimale scyllara</i>	caper gull (Australian subspecies)				1
animals	insects	Pieridae	<i>Delias argenthona argenthona</i>	scarlet jezebel				1
animals	insects	Pieridae	<i>Eurema hecabe</i>	large grass-yellow				2
animals	insects	Pieridae	<i>Eurema smilax</i>	small grass-yellow				1
animals	mammals	Acrobatidae	<i>Acrobates pygmaeus</i>	feathertail glider		C		1
animals	mammals	Canidae	<i>Canis familiaris (dingo)</i>	dingo				1
animals	mammals	Dasyuridae	<i>Antechinus flavipes flavipes</i>	yellow-footed antechinus (south-east Queensland)		C		2
animals	mammals	Dasyuridae	<i>Phascogale tapoatafa tapoatafa</i>	brush-tailed phascogale		C		2
animals	mammals	Emballonuridae	<i>Saccolaimus flaviventris</i>	yellow-bellied sheath-tail bat		C		2
animals	mammals	Macropodidae	<i>Macropus giganteus</i>	eastern grey kangaroo		C		11
animals	mammals	Macropodidae	<i>Macropus sp.</i>			C		2
animals	mammals	Macropodidae	<i>Notamacropus dorsalis</i>	black-striped wallaby		C		1
animals	mammals	Macropodidae	<i>Notamacropus parryi</i>	whiptail wallaby		C		3
animals	mammals	Macropodidae	<i>Notamacropus rufogriseus</i>	red-necked wallaby		C		16
animals	mammals	Macropodidae	<i>Wallabia bicolor</i>	swamp wallaby		C		2
animals	mammals	Miniopteridae	<i>Miniopterus australis</i>	little bent-wing bat		C		1
animals	mammals	Miniopteridae	<i>Miniopterus schreibersii oceanensis</i>	eastern bent-wing bat		C		1
animals	mammals	Molossidae	<i>Austronomus australis</i>	white-striped freetail bat		C		6
animals	mammals	Molossidae	<i>Mormopterus sp.</i>			C		1
animals	mammals	Peramelidae	<i>Isodon macrourus</i>	northern brown bandicoot		C		4
animals	mammals	Petauridae	<i>Petaurus breviceps sensu lato</i>	sugar glider		C		6
animals	mammals	Petauridae	<i>Petaurus norfolcensis</i>	squirrel glider		C		10
animals	mammals	Petauridae	<i>Petaurus sp.</i>			C		1
animals	mammals	Phalangeridae	<i>Trichosurus caninus</i>	short-eared possum		C		1
animals	mammals	Phalangeridae	<i>Trichosurus vulpecula</i>	common brushtail possum		C		20
animals	mammals	Phascolarctidae	<i>Phascolarctos cinereus</i>	koala	E	E		90
animals	mammals	Potoroidae	<i>Aepyprymnus rufescens</i>	rufous bettong		C		1
animals	mammals	Pseudocheiridae	<i>Petauroides volans volans</i>	southern greater glider		E	E	1
animals	mammals	Pseudocheiridae	<i>Pseudocheirus peregrinus</i>	common ringtail possum		C		1
animals	mammals	Pteropodidae	<i>Pteropus alecto</i>	black flying-fox		C		18
animals	mammals	Pteropodidae	<i>Pteropus poliocephalus</i>	grey-headed flying-fox		C	V	20
animals	mammals	Tachyglossidae	<i>Tachyglossus aculeatus</i>	short-beaked echidna		SL		11
animals	mammals	Vespertilionidae	<i>Chalinolobus gouldii</i>	Gould's wattled bat		C		1
animals	mammals	Vespertilionidae	<i>Chalinolobus morio</i>	chocolate wattled bat		C		1
animals	mammals	Vespertilionidae	<i>Myotis macropus</i>	large-footed myotis		C		1
animals	mammals	Vespertilionidae	<i>Nyctophilus gouldi</i>	Gould's long-eared bat		C		1
animals	mammals	Vespertilionidae	<i>Scotorepens greyii</i>	little broad-nosed bat		C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	mammals	Vespertilionidae	<i>Scotorepens sp. (Parnaby)</i>	central-eastern broad-nosed bat		C		1
animals	mammals	Vespertilionidae	<i>Vespadelus troughtoni</i>	eastern cave bat		C		1
animals	ray-finned fishes	Ambassidae	<i>Ambassis agassizii</i>	Agassiz's glassfish				1
animals	ray-finned fishes	Anguillidae	<i>Anguilla australis</i>	southern shortfin eel				3
animals	ray-finned fishes	Anguillidae	<i>Anguilla reinhardtii</i>	longfin eel				3
animals	ray-finned fishes	Atherinidae	<i>Craterocephalus stercusmuscarum</i>	flyspecked hardyhead				1
animals	ray-finned fishes	Eleotridae	<i>Gobiomorphus australis</i>	striped gudgeon				1
animals	ray-finned fishes	Eleotridae	<i>Hypseleotris compressa</i>	empire gudgeon				2
animals	ray-finned fishes	Eleotridae	<i>Hypseleotris galii</i>	firetail gudgeon				1
animals	ray-finned fishes	Eleotridae	<i>Hypseleotris sp.</i>					2
animals	ray-finned fishes	Eleotridae	<i>Philypnodon grandiceps</i>	flathead gudgeon				1
animals	ray-finned fishes	Melanotaeniidae	<i>Melanotaenia duboulayi</i>	crimsonspotted rainbowfish				1
animals	ray-finned fishes	Plotosidae	<i>Tandanus tandanus</i>	freshwater catfish				1
animals	reptiles	Agamidae	<i>Diporiphora australis</i>	tommy roundhead		C		2
animals	reptiles	Agamidae	<i>Intellagama lesueurii</i>	eastern water dragon		C		7
animals	reptiles	Agamidae	<i>Pogona barbata</i>	bearded dragon		C		13
animals	reptiles	Boidae	<i>Morelia spilota</i>	carpet python		C		4
animals	reptiles	Chelidae	<i>Chelodina expansa</i>	broad-shelled river turtle		C		1
animals	reptiles	Chelidae	<i>Chelodina longicollis</i>	eastern snake-necked turtle		C		2
animals	reptiles	Chelidae	<i>Emydura macquarii macquarii</i>	Murray turtle		C		2
animals	reptiles	Colubridae	<i>Boiga irregularis</i>	brown tree snake		C		1
animals	reptiles	Colubridae	<i>Dendrelaphis punctulatus</i>	green tree snake		C		12
animals	reptiles	Colubridae	<i>Tropidonophis mairii</i>	freshwater snake		C		1
animals	reptiles	Elapidae	<i>Brachyurophis australis</i>	coral snake		C		1
animals	reptiles	Elapidae	<i>Cacophis harriettae</i>	white-crowned snake		C		3
animals	reptiles	Elapidae	<i>Cryptophis nigrescens</i>	eastern small-eyed snake		C		1
animals	reptiles	Elapidae	<i>Demansia psammophis</i>	yellow-faced whipsnake		C		1
animals	reptiles	Elapidae	<i>Furina diadema</i>	red-naped snake		C		4
animals	reptiles	Elapidae	<i>Pseudechis porphyriacus</i>	red-bellied black snake		C		3
animals	reptiles	Elapidae	<i>Pseudonaja textilis</i>	eastern brown snake		C		8
animals	reptiles	Gekkonidae	<i>Gehyra dubia</i>	dubious dtella		C		3
animals	reptiles	Pygopodidae	<i>Delma plebeia</i>	common delma		C		2
animals	reptiles	Scincidae	<i>Anomalopus verreauxii</i>	three-clawed worm-skink		C		2
animals	reptiles	Scincidae	<i>Carlia pectoralis</i>	open-litter rainbow skink		C		2
animals	reptiles	Scincidae	<i>Carlia pectoralis sensu lato</i>			C		1
animals	reptiles	Scincidae	<i>Carlia vivax</i>	tussock rainbow-skink		C		4
animals	reptiles	Scincidae	<i>Concinnia martini</i>	dark bar-sided skink		C		1
animals	reptiles	Scincidae	<i>Cryptoblepharus pulcher pulcher</i>	elegant snake-eyed skink		C		7
animals	reptiles	Scincidae	<i>Ctenotus spaldingi</i>	straight-browed ctenotus		C		6
animals	reptiles	Scincidae	<i>Ctenotus taeniolatus</i>	copper-tailed skink		C		1
animals	reptiles	Scincidae	<i>Karma murrayi</i>	Murray's skink		C		1
animals	reptiles	Scincidae	<i>Lampropholis amicula</i>	friendly sunskink		C		2
animals	reptiles	Scincidae	<i>Lampropholis delicata</i>	dark-flecked garden sunskink		C		7
animals	reptiles	Scincidae	<i>Lampropholis sp.</i>			C		1
animals	reptiles	Scincidae	<i>Lygisaurus foliorum</i>	tree-base litter-skink		C		2
animals	reptiles	Scincidae	<i>Tiliqua scincoides scincoides</i>	eastern bluetongue		C		3

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	reptiles	Typhlopidae	<i>Anilius wiedii</i>	brown-snouted blind snake		C		1
animals	reptiles	Varanidae	<i>Varanus varius</i>	lace monitor		C		3

CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*.

The codes are Extinct (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*.

The values of EPBC are Extinct (EX), Extinct in the Wild (XW), Critically Endangered (CE), Endangered (E), Vulnerable (V) and Conservation Dependent (CD).

Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).

This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.

This number is output as 999 if it equals or exceeds this value.



July 2024

Fauna Spotter Catcher Wildlife and Habitat Impact Mitigation Plan

Amory Stages 1 and 2
695 Ripley Road, Ripley, Queensland
Report prepared for Winslow



Report prepared by
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1. Introduction

1.1 Project Background

Queensland Fauna Consultancy Pty Ltd has been engaged by Winslow to prepare a Fauna Spotter Catcher Wildlife and Habitat Impact Mitigation Plan for the Amory Stages 1 and 2 development located at Ripley, Queensland. The site location is presented in Map 1.

The objective of this report is to summarise the existing fauna values presented in the Fauna Spotter Catcher Pre-Clearance Survey and Wildlife Protection and Management Plan (WPMP) and assign mitigatory strategies applicable to probable species likely to be encountered during the clearing of identified habitats throughout or within specific localities of the site. Fauna species both common and of elevated conservation value have been considered within the parameters of onsite investigations and, where provided to QFC, include review of current fauna and floristic reports that may influence the assemblages expected to utilise the microhabitats evident within the site.

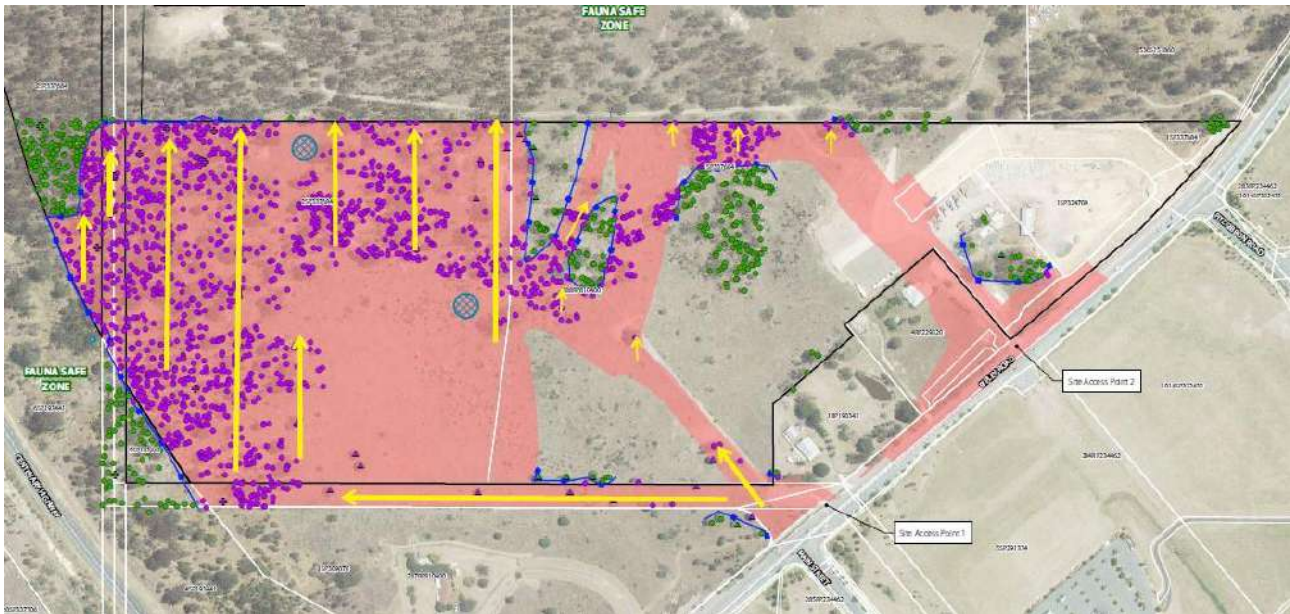
This review encompasses species identified under the provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and the Queensland *Nature Conservation Act 1992*. Further consideration is given, where applicable, to species of iconic, cultural and/or regional significance identified under commonwealth, state or local planning instruments aimed at the persistence of biodiversity values within the area.

1.2 Project Location and Site Description

Amory Stages 1 and 2 is located at along Ripley Road, Ripley, west of the Ripley Town Centre and north of the Centenary Highway. The total clearing area is approximately 24 hectares.

Existing features exhibit a remnant woodland vegetative complex bordering a grassy plain. Dominant trees species include *Acacia* species, *Eucalyptus tereticornis*, *E. siderophloia*, *E. crebra*, *E. moluccana*, *E. robusta*, *E. major*, *Corymbia citriodora*, *C. trachyphloia*, and *Angophora leiocarpa* and there are scattered sections present where ornamental species are dominant. Understorey vegetation consists of grass, scattered shrubs, *Lomandra* species, and dense leaf litter.

Map 1: Project Location



Amory Stages 1 and 2 (Site extents provided by Winslow, 2024)

1.3 Current Permits and Authorities

All activities conducted during the site investigations were implemented under the provisions of several permits issued to Queensland Fauna Consultancy Pty Ltd by the Department of Environment, Science and Innovation (DESI), and the Department of Agriculture and Fisheries (DAF). These permits and additional authorities are listed in Table 1.

Table 1: Current Permits and authorities issued to QFC

Permit/Authorisation	Permit Number	Expiry Date
Damage Mitigation Permit	WA0047114	31 st October 2025
Rehabilitation Permit	WA0054295	13 th September 2026
Scientific Purposes Permit	WA0032325	3 rd March 2026
Scientific User Registration	Registration Number 589	27 th February 2025
Animal Ethics	CA 2022/01/1569	27 th February 2025
General Fisheries Permit	262922	10 th May 2026

These permits and approvals enable QFC to conduct the investigation, observation and relocation of protected animals exposed to disturbance due to infrastructure expansion resulting in the destruction of natural and artificial habitats.

2. Mitigation Strategies

2.1 Fauna Spotter

It is advised that all identified fauna habitats onsite be inspected by a licensed Fauna Spotter prior to vegetation clearing, and all vegetation removal activities be supervised during the clearing process.

2.2 Clearing Methodologies

In accordance to the *Nature Conservation (Koala) Conservation Plan 2017* the following sequential clearing conditions are required to be adhered to:

- Clearing of trees is carried out in a way that ensures koalas living in or near the area being cleared (the clearing site) have enough time to move out of the clearing site without human intervention, including in particular, for a clearing site with an area of more than 6ha, by:
 - Carrying out the clearing in stages; and
 - Ensuring not more than the following is cleared in any one stage:
 - for a clearing site with an area of 6 ha or less—50 percent of the site's area;
 - for a clearing site with an area of more than 6ha—3ha or 3 percent of the site's area, whichever is the greater; and
 - Ensuring that between each stage there is at least one period of 12 hours that starts at 6 p.m. on a day and ends at 6 a.m. on the following day, during which no trees are cleared on the site;

In addition to these measures it is recommended that clearing activities be undertaken in a directional manner specified by the fauna spotter/catcher. This is done to reduce the likelihood of negative interactions between fauna and potential hazards e.g. roads and traffic, prevent isolation of fauna through habitat fragmentation, and to ensure that natural dispersal of wildlife away from clearing activities is not impeded.

A plan detailing the recommended clearing direction for Phase 1 can be viewed in Appendix A.

2.3 Fauna Fencing

Due to the location of the clearing footprint, the installation of temporary fencing in conjunction with existing residential fencing may aid in minimizing the movement of large fauna, including highly mobile macropods into adjacent estates and nearby roadways.

The addition of further fauna fencing may be required if site conditions change and fauna considerations are presented by the fauna spotter catcher.

2.4 Felling Procedures

Trees identified as having potential fauna values (such as hollows, arboreal termitaria and exfoliating bark) will be clearly identified and subsequently marked for supervision during felling and inspected once felled. Efforts will be made to determine potentially occupant species by way of investigations for indicative signs (scats, scratchings and tracks) on the day(s) of clearing. Where no signs are found or potentially occupant species are undeterminable, machinery operators will be instructed to fell trees in a manner directed at minimising the potential risk of injury to fauna.

All identified microhabitats will be inspected via ground-based observation and the direction of felling will be determined considering the safety of personnel, machinery and potentially occupant fauna. Felling procedures will see implementation of a soft felling technique specifically constructed by QFC to achieve minimal deceleration and impact upon felling. This will be achieved under direction of the Fauna Spotter present directly communicating with the plant operator(s).

2.5 Macropods

Macropod movement throughout the site was identified by the presence of scats and footprints during the fauna survey.

The area of proposed clearing activities exhibits direct connectivity to notable habitat values to the west. Therefore if clearing commences in a directional and incremental fashion any macropods potentially encountered on site may move on of their own volition. In this event, it is recommended that clearing proceed as already recommended with continual reassessment by the onsite fauna spotters.

2.6 Aquatic Fauna

In the event aquatic dewatering activities will be required within the proposed clearing area; pooled water and drainage features will be inspected during terrestrial load reduction activities ahead of the clearing front. The following recommendations are made to mitigate impacts to potentially occupant fauna:

- Inspection of banks, peripheral vegetation and other immediate terrestrial microhabitats;
- Identification of potential fauna values including: logs, rocks, artificial structures, discarded rubbish and burrows;
- Targeted searched for frog egg deposition sites on debris, bank edges, water surface and vegetation.

2.7 General Terrestrial and Arboreal Fauna

Overall the site contains medium value refugial opportunities for arboreal and terrestrial fauna species. The species expected within the site are likely to primarily reflect common fauna assemblages for the region however provisions are proposed directly for common fauna and species of conservation significance.

It is advised that all identified fauna habitats onsite be inspected by a DES approved Fauna Spotter prior to vegetation clearing and all vegetation removal activities be supervised during the clearing process. Terrestrial load reduction activities will be conducted ahead of the clearing front where possible. Fauna captured will be relocated to adjacent habitat consistent with the life history requirements of the species requiring translocation.

2.8 EVNT & SLC Fauna

It is not envisaged that any species, listed under the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* or the *Nature Conservation Act 1992*, other than those listed in the WPMP, will require specific management during vegetation clearing activities.

However, specific management for those identified EVNT & SLC species will include targeted investigations immediately prior to vegetation removal activities on each day of clearing and subsequently whilst clearing takes place. Preliminary investigations will be supported by additional monitoring applied during clearing activities with a designated fauna spotter operating with each machine actively involved in vegetation or identified habitat disturbance. These should include the following:

Short-beaked Echidna

Although no individuals were observed during the survey, evidence of echidna use throughout the site was observed during the inspection by QFC and would see possibility for the Short-beaked Echidna to be encountered during clearing activities.

The following recommendations are made for management of potentially occurring Short-beaked Echidna:

- Daily inspection of areas to be cleared for transient individuals;
- Inspection daily for potential burrow sites;
- Monitored dismantling of identified microhabitats by fauna spotters with machinery assistance

Koala:

As favoured Koala food trees on site exceed a diameter of 100mm at 1.3 metres from the ground, requirements under the Koala Plan's 'Koala Habitat Area' provisions trigger the need for inspection and monitoring during vegetation clearing by a qualified Fauna Spotter.

Historically known to occur within the area the Koala will feature highly in daily search efforts with a dedicated and detailed methodology employed as follows:

- Pre-clearing (preliminary) investigations to be conducted specifically for Koala detection by one experienced fauna spotter a minimum half hour prior to works each day. The investigation will embrace all designated clearing zones identified for that day inclusive of a 25-metre buffer around that zone;
- Once clearing commences a fauna spotter will accompany each machine providing continuous verification of habitat values and potential identification of undetected koalas ahead of operating plant. This will also account for potentially transient Koalas that may enter the site after preliminary investigations are complete.

Direct observational methodology will include the following components

- Use of binoculars to inspect the crown, forks and trunk of trees for individuals currently occupying the site;
- 'Drip zone' searches at the base of known food trees for the presence of scats to a radius equal to that of the crown of individual trees;
- Inspection of trunks for scratchings indicative of use by Koalas;
- Repeat observations made of single trees from numerous angles at repeated times throughout the clearing activities by the assigned fauna spotter.

In the event a Koala is detected, the Fauna Spotter will determine the appropriate course of action with exclusion zones implemented and alterations to the clearing plan discussed with the Site Supervisor. Once defined, these directions will be communicated to the plant operators and clearing will proceed in accordance with the recommendations made.

Changes to Koala management strategies highlighted in the *Nature Conservation (Koala) Conservation Plan 2017* have resulted in particular conditions placed on vegetation clearance involving the removal of Koala food trees. These provisions entail an increased responsibility by developers and land clearance operators alike to ensure the welfare of potentially present Koalas in areas identified as having significance for the persistence of this species.

Where significance under planning instruments is assigned provisions may include the restriction of all clearance that directly interferes with any tree a Koala is residing in or surrounding trees that, when felled, may impact on the crown of the host tree. Koalas are to leave via their own volition through a corridor designated by the Fauna Spotter to the closest remaining suitable habitat.

Throughout this time the Koala may not be interfered with by any means unless special dispensation has been sought through the appropriate government body or where the Koala is evidently in a state of compromised health. Only when Koalas have vacated a tree can clearance operations include the identified host tree and surrounding vegetation which composes the established exclusion zone. Recommendations made by the Fauna Spotter on site will embrace these provisions.

Response to Diseased/Injured Koalas

In the event the Fauna Spotter Catcher detects a koala showing signs of disease or injury the following procedure is to be implemented immediately after establishing the machinery exclusion zone:

- Photograph the animal and where possible the specific issue observed (i.e. dirty rump, emaciation);
- Contact Bryan Robinson, Principal Ecologist at QFC, to provide further assessment of the Koala via the images taken;
- Bryan to contact the Ipswich Koala Protection Society (IKPS) President Ruth Lewis for further opinion and collaboratively decide on the relevant response and timing;
- Where deemed to require veterinary assistance a Koala trap will be acquired from IKPS and installed by QFC;
- Bryan to ensure DES are immediately notified of the intended take of the animal;
- All Koalas will be taken to Moggill Koala Hospital for veterinary examination upon capture.

Employed Koala Trapping Technique

A dedicated Koala trap will be utilised in the event a Koala is deemed to require veterinary assistance. The trap used (Figure 1 and Figure 2) will be supplied by IKPS and consists of the following components:

- 1200mm high Core flute wall;
- Steel bracing pins/star pickets;
- Zip ties;
- Purpose built Koala trapping box with guillotine/footpad style closing mechanism.

The core flute wall is placed around the tree the koala is in to form a solid barrier, subsequently channelling the animal to the trapping box when it descends from the tree. Checks are conducted on the trap periodically between 6pm and 6am to check if the Koala has entered the trap. Once captured the Koala is transported within the trapping box to minimise handling and undue stress or interference. Notification is given immediately to Bryan Robinson who will provide transportation and inform IKPS of the pending arrival of the Koala to Moggill Koala Hospital.



Figure 1: Koala trap exterior



Figure 2: Koala trap interior

Grey-headed Flying Fox:

Although no Flying Fox camps or roosts were noted during the site survey, the transient nature of this species and the abundance of available feeding resources would see probability for the species to intermittently utilise the site.

The following recommendations are made for management of potentially occurring Grey-headed Flying Fox:

- Daily inspection of trees assigned for removal be conducted to detect potential roosting Flying Foxes;
- Trees found to contain roosting Flying Foxes to be left standing and re assessed at the end of each days clearing. Being a transient species, the disturbance associated by the surrounding clearing is likely to see individuals fly off via its own volition come nightfall and not return the following morning, thus negating the need for direct disturbance.

Spotted-tail Quoll:

Although no dens or further evidence of Spotted-tail Quoll activity was detected during the survey, the species is known to occur historically in low densities in proximity to the site. Geomorphic structure and topography are considered favourable resulting in the following recommendations for further mitigation during the clearing activity:

- Inspection daily of identified geomorphic structure such as large boulders and rock accumulates, large hollow ground logs and log stock piles;
- Monitored dismantling of identified microhabitats by fauna spotters with machinery assistance.

Greater Glider:

The site contains hollow-bearing trees with the potential to support den localities for the Greater Glider. Suitable feeding resources are highly available given the availability of *Eucalyptus* leaves; on which the Greater Glider almost exclusively feeds on. The following recommendations are made for management of potentially occurring Greater Glider;

- Basal and drip zone searches for scats indicative of the presence of Greater Glider;
- Inspection daily of trees assigned for removal in areas of likely occurrence to detect Great Glider;
- Implementation of a soft felling technique where trees are determined to have potential for occupancy.

Rufous Fantail:

The site contains preferred habitat types with the potential to support nesting localities for the Rufous Fantail.

The following recommendations are made for management of potentially occurring Rufous Fantail:

- Inspection daily of trees assigned for removal in areas of likely occurrence to detect potentially roosting birds;
- Observation of mature birds to ensure individuals are out of immediate felling zones;
- Implementation of a soft felling technique where trees are determined to have potential nests.

Collared Delma:

The presence of rocky habitat combined with *Eucalyptus* dominated woodlands presents known favorable habitat for the Collared Delma. The following recommendations are made for mitigation during clearing activity:

- Inspection daily of identified geomorphic structures including rocky outcrops, surface rock, leaf litter and bark exfoliates;
- Monitored dismantling of identified microhabitats by fauna spotters with machinery assistance.

Tusked Frog:

Habitats conducive to the presence of these amphibians are noted at particular localities throughout the site. Subsequently, it is recommended that inspection of these microhabitats be conducted prior to the disturbance of microhabitat to detect potentially occupant frogs.

3. Wildlife Capture & Removal Plan

Relocation of native fauna is a strategy that may be required during the course of developmental works to adhere to the project's required nature conservation, animal welfare and human safety objectives.

In all circumstances where native fauna is required to be relocated it must be done so by, or under the direct supervision of, a suitably licensed fauna spotter/catcher. A summary of the fauna capture, handling and relocations strategies to be implemented by the fauna spotter/catcher for fauna groups deemed likely, or possible, to occur on site are presented in *Table 2*.

Table 2: Fauna capture, handling and relocation strategy table

Animal Group	Capture and handling	Relocation
Lizards Geckoes Dragons Monitors	<ul style="list-style-type: none"> • Place one hand behind the head at the base of the quadrates and the other at the base of the tail behind the hind limbs; • Be cautious when handling smaller skinks and legless lizards as they may discard their tail; • Lizards and geckoes can be placed inside suitably sized calico bags • In the case of large monitor lizards keep the animal's ventral surface directly away from the body with the tail between the upper arm and torso. • Dragons and small monitors can be placed in suitably sized calico bags. Larger monitors to be placed in suitably sized crate 	<ul style="list-style-type: none"> • Place the lizard head first into a suitable holding crate for later release. <ul style="list-style-type: none"> ○ Dragons & monitors– release up trees or into heavy vegetation; ○ Water dragons – in the vicinity of riparian areas; ○ Skinks, Geckoes, Legless lizards – around creek margins.
Snakes	<ul style="list-style-type: none"> • Due to their mobile nature, large snakes generally do not require to be handled or relocated, with the exception of slow moving species (i.e. pythons) or smaller species; • Snakes should be identified and only moved if competent and safe to do so (see SOP006 Handling Venomous Snakes Procedure); • Do not attempt to catch a snake if you're not competent; • Injured snakes should be handled with suitable equipment. 	<ul style="list-style-type: none"> • Release in suitable habitat e.g. along creek lines for python and tree snakes • If feasible take them well away from clearance site to a suitable release location • Release discreetly away from high density suburban areas
Small Mammals	<ul style="list-style-type: none"> • Place a gloved hand around the whole animal in the case of small mammals (melomys or rats), • Do not handle rodents by the tail as this will cause damage to the tail sheath • Place the animal in calico bag in a cool place for later relocation. • Minimise holding time to avoid animal gnawing through bags and escaping 	<ul style="list-style-type: none"> • Release animal into area suitable to its habitat requirements. Ensure plenty of cover is available.

Animal Group	Capture and handling	Relocation
<p>Glider Family</p>	<ul style="list-style-type: none"> • Place gloved hands around the animal at initial capture; • Place the glider(s) into a calico bag or suitable animal crate ensuring family groups are kept together for all-inclusive release; • Place in a cool dry area during the day. • When using calico bags ensure the bag is hung and well ventilated • Where possible contain gliders within hollow by plugging openings with a towel or calico bag 	<ul style="list-style-type: none"> • Release glider into habitat with natural hollows and canopy cover; • When releasing a family group with more than one furred young (being carried on the back) either: <ul style="list-style-type: none"> ○ Divide young between parents as a mother is unlikely to carry more than one young, ○ Place young in elevated hollow with parents and allow them to move away in their own time. • Place animal in bag at the base of the selected tree, opening the bag wide and allowing the animal to leave the bag when it is ready. • Relocate hollow (with gliders inside) to suitable habitat and cover lightly with foliage so that the gliders can move away of their own accord and are protected from predators.
<p>Amphibians</p>	<ul style="list-style-type: none"> • Amphibians should be handled only when necessary and handling times should be kept to a minimum to help prevent: <ul style="list-style-type: none"> ○ Removal of the protective mucous layer covering the skin of amphibians; ○ To prevent handling stress induced by changes in their body temperature; ○ Risk of spreading pathogens and parasites. • Amphibians from different sites need to be kept isolated from each other, and need to be kept in different containers or bags; • Any dead or sick amphibians need to be quarantined from other amphibians. <p>Amphibians can be handled utilising one of the following methodologies:</p> <ul style="list-style-type: none"> • Bare handed – ensure hands are sterilized before handling and free from lotions, sunscreen etc. • Gloves – disposable gloves desirable or disinfect gloves between handling different animals; • Plastic bags – Single use lightweight plastic bags can be used to pick up and handle frogs; again, plastic bags should be disposed of before handling amphibians from a different site. • All staff should be knowledgeable and familiar with the <i>Interim Hygiene Protocol for Handling Amphibians – Technical Manual (DEHP)</i> 	<ul style="list-style-type: none"> • Always ensure that amphibians are kept moist until release. This can include storing in a designated container with moist soil or toweling or in a wet calico bag; • Release into suitable adjacent vegetation that is typical of the species requirements; • Suitable release locations include riparian vegetation, low-lying wetlands, alongside creek lines, hollow logs, dams and ponds; • Amphibians from different sites need to be released in separate locations; • Disinfection procedures in relation to amphibians need to be followed.

Animal Group	Capture and handling	Relocation
Macropods	<ul style="list-style-type: none"> Capture and restraint of macropods carries a high risk of injury and fatal hyperthermia/myopathy syndrome, and must not be performed by inexperienced personnel, or without appropriate equipment and sedation. Capture and restraint of healthy macropods (other than pouch young) must be performed using sedation or anaesthesia due to the high risk of developmental myopathy, and other capture and restraint-associated conditions. Sedative and anaesthetic drugs may only be used under direct supervision of a registered veterinarian, or by appropriately licensed persons (Hanger & Nottidge, 2009). 	<ul style="list-style-type: none"> Release animal into suitable to its habitat requirements. Ensure plenty of cover is available. Macropods are to be released within the range of normal movement from their place of origin. E.g. a Kangaroo can be released within 100 km of its origin, based on its capacity to travel long distances. Monitor animals to ensure adequate recovery if sedated.
Microbats	<ul style="list-style-type: none"> Only vaccinated persons are to handle bats If possible, plug the hollow opening with a bag or towel and ask the operator to cut the hollow from the tree; Always wear gloves when handling bats. If not contained within a hollow, place bats inside a calico bag and hang upright in a cool place 	<ul style="list-style-type: none"> Relocate hollow (with bats inside) to suitable habitat and cover lightly with foliage so that the bats can move away of their own accord and are protected from predators. Bats not contained within a hollow should be released as late as possible at the end of the day.
Possums	<ul style="list-style-type: none"> Use thick elbow length gloves when handling possums; Try to grip the animal behind the head near the shoulder blades and around the tail so that you have control of the animal; Keep fingers away from the mouth of the animal; Keep the animal's body facing away at all times; Transfer into a thick calico bag and then into a kitty crate. Place in a safe and shady place until you can relocate the animal. 	<ul style="list-style-type: none"> Release the possum into habitat with adequate hollows and cover; Place animal in bag at the base of a select tree, opening the bag and allow the animal to leave the bag when it is ready; When releasing a Ringtail Possum mother with more than one furred young (being carried on her back) it is unlikely that she will carry both young if highly stressed; <ul style="list-style-type: none"> Choose a smaller shrubby tree with vines or heavy foliage (so the adult can construct a drey easily) Watch the adult ascend the tree, it is possible she will only carry one young and so any additional young may be pushed from her back It may be necessary to take one or more of the young to a wildlife carer If possible place mother and young in a suspended hollow, cover lightly with foliage and allow the animals to move on their own accord. This way the mother can ferry young one at a time to a more suitable location.

Animal Group	Capture and handling	Relocation
Birds	<ul style="list-style-type: none"> • Use gloves when handling larger birds • Use a towel to cover the bird and simultaneously restrain the bird and transfer into calico bag • With larger parrots and raptors, restrain head and legs and transfer into a kitty crate • Wrap chicks loosely in a towel and transfer to kitty crate, keep in a warm location. 	<ul style="list-style-type: none"> • Relocate adult birds in suitable habitat • Chicks should be referred to wildlife carer
Koalas	<p>Movement of Koalas is heavily legislated in South East Queensland. Koalas are not to be captured or relocated without the prior consent of Department of Environment and Science (DES). Koalas should be left to move away of their own volition and trees are not to be felled while a Koala remains in occupancy. See SOP003 Koala Management Procedure for further information.</p>	

4. Wildlife Contingency Plan

In the event sick, injured or orphaned protected animals are encountered during the course of the project they shall be administered to in accordance with the *Code of Practice Care of Sick, Injured or Orphaned Protected Animals in Queensland* under the *Nature Conservation Act 1992*.

The stages in which injuries or illness are described under the code are as follows:

Critical: Injuries or illnesses that are life-threatening; for example, an animal that has been struck by a car and has serious head injuries.

Serious: Injuries or illnesses that might reasonably be expected to cause moderate pain (but are not immediately life-threatening), and the animal is not showing obvious signs of distress or pain, or significantly reduced mental activity; for example, an animal with a closed fracture but no other apparent injuries and that is alert and responsive.

Mild: The injuries or illness of an animal appear to cause little discomfort, pain or function loss and are not life-threatening (even without immediate vet treatment); for example, superficial cuts, superficial bruising or orphaned animals suffering from mild dehydration.

4.1 Basic Wildlife Care

If wildlife requiring care are encountered by the fauna spotter/catcher, they will be attended to in the manner set out by the guidelines provided in *Table 4*. Supplementary advice will be sought from a wildlife carer and/or veterinarian where required. QFC have previously utilised experienced local carer groups and vets. These are listed in *Table 3*.

Table 3: List of Local Vets & Wildlife Carer Groups

Vets			
Name	Location	Contact Number	Comments
RSPCA Wildlife Hospital	139 Wacol Station Road, Wacol	07 3426 9999	24 Hours/7days
Carers			
Name	Location	Contact Number	Comments
RSPCA Wildlife Hospital	139 Wacol Station Road, Wacol	07 3426 9999	24 Hours/7days
Ipswich Koala Protection Society	Ipswich	Ruth: 07 5464 6274 / 0419 760 127 Helen: 07 3282 5035 / 0417 604 761	Specialize in koalas however rescue all wildlife
Ann De Jong	Gailes	(07) 3736 1967	Most fauna, particularly birds
Jessica	Park Ridge South	0431 330 664	Birds
Natalie Scotcher	Goodna	0430 007 691	Marsupials, macropods, birds
Ivan	Woodend	0413 262 300	Most fauna, particularly birds

Table 4: Basic Wildlife Care

Birds	Reptiles & Amphibians	Mammals
<p>Egg</p> <p>Viable eggs must be kept warm until transferred to a suitable wildlife carer. It is necessary that the orientation of the eggs be maintained as fixed embryos may be lost. Keep wrapped in a pouch and on a heat source (where available). An ideal temperature is between 25-27° (DEHP 2013); where possible attempt to identify the species so the carer can be informed as the management of eggs can vary in accordance with species and stage of development.</p>	<p>Egg</p> <p>Viable eggs must be kept warm and stable until transferred to a wildlife carer. It is necessary that the orientation of the eggs be maintained as fixed embryos may be lost. Keep wrapped in pouch or towel and place into an animal crate in a safe location.</p>	<p>Neonate</p> <p>Unfurred animals need to be kept warm until transferred to a carer. Place into a pouch and onto a heat pad. Ideal temperature is between 31-34°. 25-27° is appropriate in most other cases (DEHP 2013). Regularly check the animal to ensure it is not overheating by observing for obvious signs of distress (i.e. panting, very warm to the touch, red blotched skin). Adjust the temperature where required. Seek further advice from the carer if you are unsure.</p>
<p>Chick</p> <p>Make sure the animal is correctly identified as different species often have very different requirements. Place chicks into a pouch/towel onto a heat source maintained around 31-34° (only if they have not fledged) and keep in an animal crate until transferred to a carer.</p>	<p>Juvenile</p> <p>Place animals in a suitable lined crate and keep covered in a dark quiet place. Refer to the wildlife contact list in your QFC Folder for a carer who specialises in reptiles.</p>	<p>Juvenile</p> <p>Place into a lined crate and keep covered in a dark and quiet location.</p>
<p>Adult</p> <p>Keep adult birds in a lined animal crate or cage and covered in a quiet area.</p>	<p>Adult</p> <p>Place animals in a suitable lined crate and keep covered in a dark quiet place. Refer to the wildlife contact list in your QFC Folder for a carer who specialises in reptiles.</p>	<p>Adult</p> <p>Place into a lined crate and keep covered in a dark and quiet location.</p>
<p>Feeding</p> <p>Providing food and water is generally not required during short periods (2-3 hrs) though this should be reconsidered if animals need to be held longer. Consult the vet and/or carer for further advice on how to proceed.</p>	<p>Feeding</p> <p>Newly hatched reptiles may require feeding if kept overnight. Consult with QFC for further advice. Snakes and turtles will not require feeding but water should be made available.</p>	<p>Feeding</p> <p>Providing food and water is generally not required during short periods (2-3 hrs) though this should be reconsidered if animals need to be held longer. Consult the carer for further advice on how to proceed.</p>

4.2 First Aid

Animals suffering from serious injuries or illness encountered on the project should be passed on to veterinary care as soon as possible. In the interim a licensed fauna spotter/catcher can provide first aid for the animal and organise suitable transportation.

If a seriously sick or injured animal is encountered the fauna spotter/catcher should:

1. Keep the animal calm by placing into an animal crate and keeping it covered in a dark and quiet location. Isolate any nearby threats such as domestic animals or predators.
2. Quickly and thoroughly inspect the animal for trauma. If the injuries are not serious enough to require euthanasia administer the basic first aid as a minimum (but only if capable to do so)

Representative first aid that may be administered by a fauna spotter/catcher is provided in *Table 5*.

Table 5: Wildlife First Aid

Ailment	First Aid
Bleeding	Using material that is clean and sanitary, apply direct pressure to the affected area. Bandages can be used to hold material in place until vet treatment can be sought. Veterinarian treatment should be sought for further assistance as soon as possible.
Broken limbs	House the animal in a suitably sized animal crate with towels under the animal for comfort. Keep the crate covered and in a quiet location. Proceed to a veterinarian for further assistance as soon as possible.
Injured tails	House the animal in a suitably sized animal crate with towels under the animal for comfort. Keep the crate covered and in a quiet location. Proceed to a veterinarian for further assistance as soon as possible.
Concussions	House the animal in a suitably sized animal crate with towels under the animal for comfort. Keep the crate covered and in a quiet location. Proceed to a veterinarian for further assistance as soon as possible.

4.3 Euthanasia

Section 12 of the code details how to determine when euthanasia is required and how to euthanise animals ethically. The following standards as listed under the code are to be followed when assessing whether euthanasia is required:

- The euthanasia of wildlife where required is to be provided for by all wildlife rehabilitators;
- Euthanasia without exception is to be carried out when:
 - Significant pain or suffering is to be alleviated where it is not able to be managed by a vet;
 - Further treatment is **not** practical, or recovery is **not** expected in a way in which the animal can be successfully rehabilitated back to the wild;
 - Resources are not available to provide appropriate care or an acceptable quality of life throughout the likely rehabilitation period.
- Animals that are suffering and have a poor prognosis for survival must be euthanised rather than left to die from the injury or illness. Failure to undertake appropriate action is a breach of the *Animal Care and Protection Act 2001*.
- Unless permission has been granted by the Department of Environment and Heritage Protection for the animal to enter the Queensland Species Management Plan (QSMP) or otherwise advised by the DEHP Wildlife Management Director, animals must be euthanised when:
 - An orphaned animal is not viable or likely to be rehabilitated;
 - No suitable release locations are available;
 - The ability for an animal to reproduce is lost due to an injury, disease or surgical procedure;
 - The ability to move freely or normally (i.e. run, climb, crawl, hop, fly or swim) is permanently impaired. Examples are: a missing or impaired limb, wing, foot or tail that would significantly impair the animal's ability to survive in the wild;
 - The ability to sense environment (i.e. see, smell, feel, taste or hear) is permanently impaired. For example: missing or injured organ such as an eye, ear or nose that would significantly impair the animal's ability to survive in the wild;
 - The ability to catch, find or handle food is permanently impaired;
 - Its advanced age renders it unlikely to survive in the wild.

5. Wildlife Storage & Housing Plan

For wildlife requiring storage, temporary housing and transportation to release sites and/or to a wildlife carer or veterinarian, guidelines set out in the Code of Practice and QFC's Animal Ethics Permit will be followed.

Dependent on the species of animal and condition of the animal, temporary storage and housing of animals will be as follows:

Calico bags: Calico bags will be used to temporarily house fauna such as snakes, lizards and small mammals (including microbats), Bags will range in size from 200mm x 200mm to 600mm x 1800mm. Bag selection will vary according to the size of animals to be placed in them. In the case of snakes, a "hoop bag" may be used to facilitate capture. The hoop is approximately 500mm in diameter attached to a handle. The bag is placed around the hoop ensuring a greater area in which to pass the snake through into the bag.

Plastic holding tubs/containers/animal crate: Plastic holding tubs/containers/crates will be used to temporarily house fauna such as snakes, lizards, frogs, small mammals and birds (Plastic holding tubs/containers/crates will range in size from 150mm x 150mm x 120mm to 500mm x 400mm x

400mm. Plastic holding tubs/containers/crates selection will vary according to the size and number of animals to be placed in them.

In addition to this, material is used to line the tub/crate to ensure the animals won't lose its footing. This may include folded towels on the bottom of the crate or a fitted pad. These items are washed between each use to reduce the spread of disease/parasites.

Section 9 of the Code relates to how transportation of wildlife should be undertaken. The following will be adhered to when transporting wildlife to the vet and/or carer:

- Additional pain or distress of the animal is to be avoided;
- Wildlife should only be transported when necessary;
- Transport containers must be appropriate for the species (size, strength and behaviour of species being moved);
- Transport containers must be designed and maintained in a way as to:
 - Prevent injury;
 - Prevent escape;
 - Prevent rolling/tipping during transit;
 - Prevent damage to plumage (feathers);
 - Be hygienic;
 - Minimise stress and
 - Be suitably ventilated.

- Non-compatible species must not be transported in a manner which allows for visual or physical contact;
- Containers must be secured to prevent movement and provide protection from direct sunlight, wind and rain;

Venomous, dangerous or potentially disease transmitting animals must be clearly marked with warning labels (i.e. Caution – ‘venomous snake’ or ‘live bat’) and be locked and secured.

6. Wildlife Release & Disposal Plan

Retained bushland lies to the west of the clearing area and contains similar habitat types suitable for species likely to be encountered when clearing.

With the exception of highly mobile species such as birds and macropods where natural relocation may occur, it will be necessary for the fauna spotter/catcher to translocate the majority of fauna found into suitable habitat within these areas. A map of the intended release site can be viewed in Appendix B.

In regard to all fauna capture and disposal activities conducted on the project the following records will be made:

- a. species;
- b. identification name or number;
- c. sex (M, F, or unknown);
- d. approximate age or age class (neonate, juvenile, sub-adult, adult);
- e. time and date of capture;
- f. method of capture;
- g. exact point of capture (GPS point);
- h. state of health;
- i. incidents associated with capture likely to affect the animal;
- j. veterinary intervention or treatments;
- k. time held in captivity;
- l. disposal (euthanasia, re-release, translocation etc);
- m. date and time of disposal;
- n. details of disposal (if released, exact point of release GPS);
- o. for released animals: distance in metres from point of capture to point of release.

7. Post Works Impact Minimisation

As the vast majority of the project area will be cleared of all vegetation, post works impact monitoring and/or impact minimisation is deemed not necessary.

In the event that fauna is found on site post-works, it is recommended personnel contact QFC and a licensed and experienced wildlife consultant can be dispatched to remove and relocate the animal should it be necessary. QFC wildlife consultants are available 24/7 for fauna related call-outs in relation to this project.

It is recommended that if any fauna, such as Kangaroos and Wallabies, are noted in the wider area and appear distressed post-works that QFC be contacted to further assess the situation.

8. Assessment, Conclusion and Fauna Management Recommendations

A number of conclusions and recommendations are presented, with the specific intention of providing a comprehensive management structure to facilitate minimal impact to fauna during the clearing of vegetation and subsequent disturbance of habitats. The directives given by Fauna Spotter Catchers should embrace a “best practice” approach which includes implementation of proven specific management techniques for identified habitat types and compliance with legislation relevant to the activity.

Fauna management is presented here specific to EVNT & SLC fauna, general terrestrial and arboreal fauna and aquatic fauna. Although each is treated separately, overlap does occur within target techniques providing a comprehensive approach for target species of all conservation significance.

9. References

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10. Appendix A: Intended Direction of Clearing



11. Appendix B: Intended Release Sites for Wildlife





July and August
2024

Fauna Management and Spotter/Catcher Services Report

Amory Stages 1 and 2
695 Ripley Road, Ripley
Report prepared for Winslow



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Title:	Fauna Management and Spotter/Catcher Services Report Amory Stages 1 and 2 - 695 Ripley Road, Ripley
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1 Introduction

Qld Fauna Consultancy Pty Ltd has been engaged by Winslow to conduct Fauna Spotter/Catcher and Fauna Management activities for works at Amory Stages 1 and 2 - 695 Ripley Road, Ripley.

All activities were conducted by a licensed fauna spotter working under the provisions of Rehabilitation Permit (WA0054295) issued to Queensland Fauna Consultancy Pty Ltd by the Department of Environment, Science and Innovation (DESI), approving the observation and relocation of protected animals. This permit authorises the attending spotter to capture or take a protected animal whose habitat is about to be destroyed by human activity.

This report covers clearance activities undertaken in July and August 2024.

2 Methodology

2.1 Clearance Investigations

A standard set of observational and active searching techniques were employed each day of clearance to ascertain and identify existing fauna values for each location. These include:

- Assessment of terrestrial microhabitats such as ground hollows, rock, burrows, leaf litter, fallen branches and bark exfoliations,
- Observation and assessment of occupancy of arboreal microhabitats such as tree hollows, fissures and exfoliations,
- Direct observation of active or exposed fauna,
- Identification of scats, tracks and scratchings to determine fauna present on the site.

All microhabitats were identified and subsequently inspected during clearance.

2.2 Specific methodology for Koalas *Phascolarctos cinereus*

Due to the specific requirements relating to the Koala the following techniques were employed at the clearance site to ascertain presence/absence status:

- Use of binoculars to inspect the crown, forks and trunk of trees;
- 'Drip zone' searches at the base of known food trees for the presence of scats to a radius equal to that of the crown of individual trees;
- Inspection of trunks for scratchings indicative of use by Koalas.

Recent changes to Koala management strategies highlighted in the *Nature Conservation (Koala) Conservation Plan 2017* have resulted in particular conditions placed on vegetation clearance involving the removal of Koala food trees.

Further provisions include the restriction of all clearance that may directly interfere with the tree a Koala is residing in. Koalas are to leave via their own volition and may not be interfered with by any means. Only when Koalas have vacated a tree can clearance operations include the host tree and surrounding vegetation.

2.3 Felling Procedures

Trees identified as having potential fauna values (such as hollows, fissures and exfoliating bark) were clearly marked for supervision during felling and inspected once felled. Efforts were made to determine potentially occupant species by way of investigations for indicative signs (scats, scratchings and tracks). Where no signs were found or occupant species undeterminable, machinery operators were instructed to fell trees in a manner directed at minimising the potential risk of injury to fauna.

Limbs were inspected and the direction of felling determined with regards to safety of both machinery and operators. Considerations to potentially occupant fauna were assessed and felling procedures formulated. Felling procedures may have included the following techniques:

- Machinery blades were utilised to shake the tree in an attempt to disturb fauna out of hollows or fissures to determine species present.
- If fauna were present, the tree was either left standing overnight to allow the occupant animal(s) time to leave via their own volition, or if species detected were able to be encouraged from the tree by shaking or direct capture by a wildlife spotter(s). The tree was felled with considerations to potentially undetected fauna.
- Where possible potentially occupied trees were felled with the identified microhabitat receiving minimal contact on impact.
- Adjacent felled trees were utilised to absorb the impact of potential fauna bearing trees.

2.4 Communications during Clearance

Each spotter/catcher was equipped with a hand-held radio to make positive communications with machinery operators. Communications by radio and positive hand signals were utilised to indicate intentions to machinery operators.

3 Results

The following daily inventory details fauna-based investigation results for the clearing area. Inspection activities, location, habitat values and fauna found are documented where required. Refer to Appendix A for fauna photos.

Tuesday 30th July 2024

- Pre-clearance activities carried out (refer to Methodology) at 695 Ripley Road, Ripley
- Vegetation clearance carried out at 695 Ripley Road, Ripley
- Refer to **Fauna Register** for fauna found
- 0 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 0

Nest Y N Hollows Y N Arboreal termitaria Y N Other: Exfoliating bark

No. & size of hollow/s (mm): 0

Terrestrial Microhabitats:

Hollow logs Y N Woody debris Y N Rock piles Y N Burrows Y N

Other: Artificial debris, Terrestrial termitaria, Dense leaf litter

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N Other: Pond

Wednesday 31st July 2024

- Pre-clearance activities carried out (refer to Methodology) at 695 Ripley Road, Ripley
- Vegetation clearance carried out at 695 Ripley Road, Ripley
- 2 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 1

Nest Y N Hollows Y N Arboreal termitaria Y N

Other: Exfoliating bark, Fissure

No. & size of hollow/s (mm): 150-199: 1

Terrestrial Microhabitats:

Hollow logs Y N Woody debris Y N Rock piles Y N Burrows Y N

Other: Bark exfoliations, Terrestrial termitaria, Dense leaf litter, Timber stockpiles

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N Other: Pond

No Fauna Found

Thursday 1st August 2024

- Pre-clearance activities carried out (refer to Methodology) at 695 Ripley Road, Ripley
- Vegetation clearance carried out at 695 Ripley Road, Ripley
- 9 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 9

Nest Y N Hollows Y N Arboreal termitaria Y N

Other: Drey, Exfoliating bark, Fissure

No. & size of hollow/s (mm): 50-99: 1 150-199: 1

Terrestrial Microhabitats:

Hollow logs Y N Woody debris Y N Rock piles Y N Burrows Y N

Other: Timber stockpiles, Dense leaf litter, Bark exfoliations, Terrestrial termitaria

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N Other: Pond

No Fauna Found

Friday 2nd August 2024

- Pre-clearance activities carried out (refer to Methodology) at 695 Ripley Road, Ripley
- Vegetation clearance carried out at 695 Ripley Road, Ripley
- Refer to **Fauna Register** for fauna found
- 19 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 19

Nest Y N Hollows Y N Arboreal termitaria Y N

Other: Drey, Exfoliating bark, Fissure

No. & size of hollow/s (mm): 100-149: 1

Terrestrial Microhabitats:

Hollow logs Y N Woody debris Y N Rock piles Y N Burrows Y N

Other: Timber stockpiles, Dense leaf litter, Bark exfoliations, Terrestrial termitaria

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N Other: Pond

Saturday 3rd August 2024

- Pre-clearance activities carried out (refer to Methodology) at 695 Ripley Road, Ripley
- Vegetation clearance carried out at 695 Ripley Road, Ripley
- 2 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 2

Nest Y N Hollows Y N Arboreal termitaria Y N Other: Drey

No. & size of hollow/s (mm): 0-49: 1

Terrestrial Microhabitats:

Hollow logs Y N Woody debris Y N Rock piles Y N Burrows Y N

Other: Timber stockpiles, Dense leaf litter

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N Other: Pond

No Fauna Found

Monday 5th August 2024

- Pre-clearance activities carried out (refer to Methodology) at 695 Ripley Road, Ripley
- Vegetation clearance carried out at 695 Ripley Road, Ripley
- Refer to **Fauna Register** for fauna found
- 6 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 6

Nest Y N Hollows Y N Arboreal termitaria Y N

No. & size of hollow/s (mm): 50-99: 1 150-199: 2 200-249: 2

Terrestrial Microhabitats:

Hollow logs Y N Woody debris Y N Rock piles Y N Burrows Y N

Other: Dense leaf litter, Bark exfoliations, Terrestrial termitaria

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N Other: Pond

Tuesday 6th August 2024

- Pre-clearance activities carried out (refer to Methodology) at 695 Ripley Road, Ripley
- Vegetation clearance carried out at 695 Ripley Road, Ripley
- Refer to **Fauna Register** for fauna found
- 5 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 5

Nest Y N Hollows Y N Arboreal termitaria Y N

Other: Exfoliating bark, Fissure

No. & size of hollow/s (mm): 0-49: 1 100-149: 1 150-199: 3 150-299: 2 300+: 1

Terrestrial Microhabitats:

Hollow logs Y N Woody debris Y N Rock piles Y N Burrows Y N

Other: Timber stockpiles, Dense leaf litter, Bark exfoliations

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N

Wednesday 7th August 2024

- Pre-clearance activities carried out (refer to Methodology) at 695 Ripley Road, Ripley
- Vegetation clearance carried out at 695 Ripley Road, Ripley
- Refer to **Fauna Register** for fauna found
- 4 trees flagged
- One personnel in attendance

Arboreal Microhabitats: No. flagged tree/s felled: 4

Nest Y N Hollows Y N Arboreal termitaria Y N

Other: Exfoliating bark

No. & size of hollow/s (mm): 0

Terrestrial Microhabitats:

Hollow logs Y N Woody debris Y N Rock piles Y N Burrows Y N

Other: Timber stockpiles, Dense leaf litter, Bark exfoliations, Terrestrial termitaria, Artificial debris

Aquatic habitat/s: Dam Y N Creek Y N Wetland Y N

4 Fauna Register

Collectors Name	Date	Time	Capture Location	Capture Location		Count Type	Status	Common Name - Scientific Name	Count	Release Details			Actions				Release Location Description	Comments	
				Latitude	Longitude					Date	Latitude	Longitude	R1	R2	D	I			
Grant Houston	30/07/2024	13:12	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6877	152.7971	Alive	Least Concern	Fawn-footed Melomys <i>Melomys cervinipes</i>	1	30/07/2024	-27.6884	152.7951	X					Released into thick grass away from site	
Grant Houston	30/07/2024	13:58	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6868	152.7975	Deceased	Least Concern	Verreaux's Skink <i>Anomalopus verreauxii</i>	1	NA	NA	NA			X		NA	Found deceased	
Grant Houston	30/07/2024	13:04	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6877	152.7971	Euthanised	Least Concern	Fawn-footed Melomys <i>Melomys cervinipes</i>	1	NA	NA	NA			X		NA	Humanely euthanised by FSC due to severe injuries	
Grant Houston	30/07/2024	14:43	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.68772	152.7971	Alive	Least Concern	Common Nobbi Dragon <i>Diporiphora nobbi</i>	1	30/07/2024	-27.6895	152.7971	X					Released into thick grass away from site	

Grant Houston	30/07/2024	15:34	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6877	152.7971	Alive	Least Concern	Small-eyed Snake <i>Cryptophis nigrescens</i>	1	30/07/2024	-27.6815	152.7875	X				Released into thick grass away from site	
Kingston Tam	02/08/2024	14:35	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6870	152.7960	Alive	Least Concern	Rainbow Lorikeet <i>Trichoglossus haematodus</i>	2	NA	NA	NA		V			NA	Found in Hollow: 100-149mm Taken to Ripley Veterinary Hospital
Diamantina Ward	05/08/2024	14:47	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6889	152.7985	Alive	Least Concern	Squirrel Glider <i>Petaurus norfolcensis</i>	3	05/08/2024	NA	NA	X				Self-relocated into long grass away from site	
Diamantina Ward	06/08/2024	12:51	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6888	152.7959	Alive	Least Concern	Common Brushtail Possum <i>Trichosurus vulpecula</i>	2	06/08/2024	-27.6865	152.7954	X				Released into a hollow log with surrounding long grasses and eucalyptus spp.	Found in Hollow: 100-149mm Female with Joey in pouch

Diamantina Ward	06/08/2024	10:33	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6892	152.7976	Alive	Least Concern	Desert Tree Frog <i>Litoria rubella</i>	1	06/08/2024	-27.6892	152.7976	X				Released under tree bark away from site	Found in Hollow: 150-199mm
Diamantina Ward	06/08/2024	10:37	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6893	152.7976	Alive	Near Threatened	Koala <i>Phascolarctos cinereus</i>	1	06/08/2024	-27.6896	152.7977	X				Self-relocation away outside of clearance zone	
Jaedon Lunt	07/08/2024	08:56	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6869	152.7979	Alive	Least Concern	Tommy Roundhead <i>Diporiphora australis</i>	1	07/08/2024	-27.6852	152.7957	X				Released into dense vegetation away from site	
Jaedon Lunt	07/08/2024	13:28	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6896	152.7969	Alive	Near Threatened	Koala <i>Phascolarctos cinereus</i>	1	NA	NA	NA	X				NA	Koala was found outside of the clearance boundary
Jaedon Lunt	07/08/2024	14:32	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6864	152.7980	Euthanised	Least Concern	Small-eyed Snake <i>Cryptophis nigrascens</i>	1	NA	NA	NA			X		NA	Humanely euthanised by FSC due to severe injuries

Jaedon Lunt	07/08/2024	14:32	Amory Stages 1 and 2 - 695 Ripley Road, Ripley	-27.6870	152.7982	Alive	Least Concern	Eastern Brown Snake <i>Pseudonaja textilis</i>	1	07/08/2024	-27.6852	152.7956	X				Released into dense vegetation away from site
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5 Conclusion

All vegetation clearance was supervised by a licenced fauna spotter as requested by Winslow and in accordance with stipulations as expressed in the *Nature Conservation (Koala) Conservation Plan 2017*.

Fauna found during clearance works were relocated (or self-relocated) to adjacent localities comprising suitable refugia and feeding resources consistent with individual species requirements. Young/injured fauna were taken to a certified wildlife carer or veterinary clinic.

All supervised clearance activities were conducted with the full co-operation of onsite personnel and machinery operator/s.

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7 Appendix A: Fauna Photos



Rainbow Lorikeet
Trichoglossus haematodus



Common Brushtail Possum
Trichosurus vulpecula



Koala
Phascolarctos cinereus



Small-eyed Snake
Cryptophis nigrescens



Common Nobbi Dragon
Diporiphora nobbi

Appendix C

Fauna spotter catcher reports

Australia Wide Environmental Consultants September 2024

674-SCC2409-D

WILDLIFE PROTECTION MANAGEMENT PLAN

787 Ripley Road, South Ripley, QLD 4306



Prepared for:
**Shadforth Civil
Contractors**

Delivered:
October 2024



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Revision History

Rev. #	Issue Date	Revision Details	Prepared By	Reviewed By	Approved By
0	October 2024	For Use	Ayden Ellis	Yolande Venter	Yolande Venter
1					
2					

Document Approval

Approved:	Name:	Signature:	Date:
Company Director	Yolande Venter		October 2024

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1 INTRODUCTION

1.1 Background

Australia Wide Environmental Consultants (AWEC) were commissioned by Shadforth Civil Contractors to compile a Wildlife and Habitat Mitigation Plan for the development of 787 Ripley Road South, Ripley, Queensland, 4306.

Project site is located on Lot 2 on SP326583, within the Ipswich City Council. This clearing of this development is for residential subdivision (**FIGURE 1**).

1.2 Ecologist and Qualifications

The AWEC nominated Ecologist is Yolande Venter who is a degree qualified ecologist/environmental coordinator with over 15 years of field experience within the ecology and environmental sectors.

1.3 Scope

- A. See **TABLE 1** for a non-exhaustive list of the statutory requirements and guidelines this project adheres to.
- B. A desktop review of the site's potential ecological value and any planning constraints.
- C. A site inspection which included ground truthing the desktop review findings and a fauna survey.
- D. Discussion of the likely impacts of the development upon the ecological value identified through the desktop review and site survey.

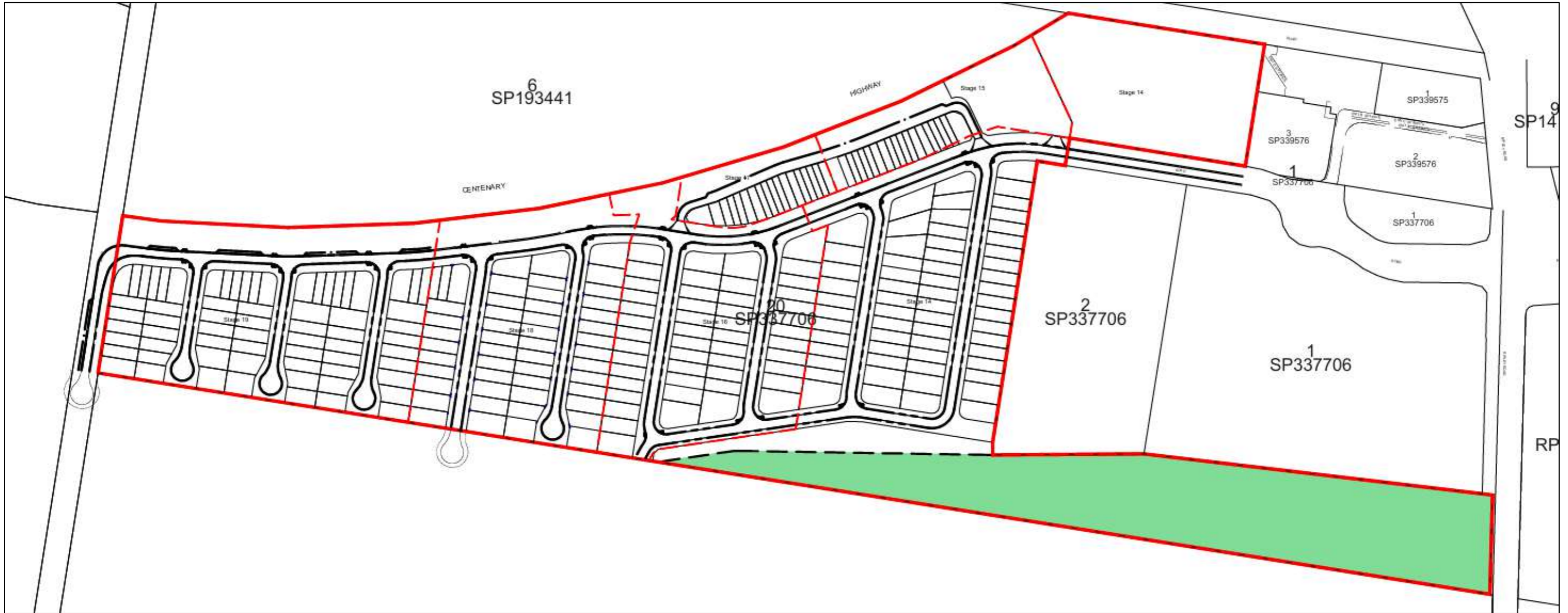


FIGURE 1- DEVELOPMENT PLAN

2 STATUTORY REQUIREMENTS AND GUIDELINES

See **TABLE 1** below for the relevant statutory requirements and guidelines.

TABLE 1 - STATUTORY REQUIREMENTS AND GUIDELINES

Legislation	Purpose of Legislation	Impact on Project personnel
Animal Care and Protection Act 2001	Animal Welfare	Outlines that animal ethics approval is needed for research, survey and/or monitoring involving vertebrates, where activities such as trapping, census leading to disturbance of animals (such as spotlighting or call play-back), abnormal interruption of behaviour or marking/tagging are involved.
Australian code for the care and use of animals for scientific purposes 8 th edition (2013)	Ethical framework for animals used for scientific purposes	Governing principles set out in the Code provide guidance for investigators, teachers, institutions, animal ethics committees and all the people involved in the care and use of animals for scientific purposes.
Biosecurity Act 2014	The <i>Biosecurity Act 2014</i> provides a framework for an effective biosecurity system for Queensland, to ensure the safety and quality of agricultural inputs, and to align responses to biosecurity risks in the state with national and international obligations.	Under the <i>Biosecurity Act 2014</i> , pest species must not be kept, fed, given away, sold, or released into the environment without a permit. Under the Biosecurity Act, everyone has a general biosecurity obligation to take reasonable and practical steps to minimise the risks associated with restricted plants and animals.
Code of Practice-Care and rehabilitation of orphaned, sick or injured protected animals by wildlife carers(2013)	Provides guidelines on the rehabilitation and care of wildlife	Detailed guidelines, in regards to hygiene, housing, capture and release, euthanasia and relevant legislation
Environmental Protection and Biodiversity Conservation Act 1999	The <i>EPBC Act 1999</i> focuses Australian Government interests on the protection of matters of national environmental significance, with the states and	To comply with the relevant sections of the Act that relate to matters of national significance which are present in the vicinity of the project works.

Legislation	Purpose of Legislation	Impact on Project personnel
	territories having responsibility for matters of state and local significance.	
Environmental Protection Regulation 2019	Gives legislative support to various national guidelines, plans and Australian Standards. This regulation also outlines requirements for the management of fauna and flora.	To abide by the regulations within the DES.
Fisheries Act 1994	The main purpose of the <i>Fisheries Act 1994</i> is to provide for the use, conservation and enhancement of the community's fisheries resources and fish habitats in a way that seeks to apply the principles of ecologically sustainable development.	Outlines fish habitats and fish movement and migration (regulation of waterway barriers). Guidelines on commercial, recreational and indigenous fishing.
Nature Conservation (Wildlife Management) Regulation 2006	This Regulation provides for the management of wildlife (including taking, keeping and using wildlife including protected plants).	Provides guidance for the management of wildlife on site, particularly in relation to the interference with native wildlife during the clearing process.
Nature Conservation (Wildlife) Regulation 2006	This Regulation lists the plants and animals considered presumed extinct, endangered, vulnerable, rare, common, international, and prohibited. It discusses their significance and states the declared management intent and the principles to be observed in any taking and use for each group.	List those animals that may be potentially found on sites being developed as part of the project and limitations for management.
Nature Conservation and Other Legislation (Koala Protection) Amendment Regulation 2020	Guideline for identifying and managing koala habitat	Provides guidance on where fauna spotter catchers are legally required and how they are to manage koala habitat
Nature Conservation Other Legislation Act 2016	The Act provides for the legislative protection of Queensland's threatened biota. It is aligned with the IUCN redlist which categorises biota into their current status in the wild.	To comply with the relevant sections of the Act and regulations and the Environmental Authority administered by the DES.

Legislation	Purpose of Legislation	Impact on Project personnel
Queensland Hygiene protocol for handling amphibians	Protocol for handling amphibian species	Outlines how to handle and manage amphibian species to prevent the spread of diseases among specimens and colonies.
Seqwater-Guideline-Stranding and Salvage	Fish and The purpose of this guidance document is to ensure native fish recovery operations are conducted in a timely and safe manner to minimise or eliminate loss of fish from stranding.	Guideline on managing aquatic fauna during dewatering works.
Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (2018)	Guidelines for Fauna Surveys	Detailed guidelines on designing a survey, the different survey methodologies and the ethical considerations that need to be made for each methodology.

Australia Wide Environmental Consultants (AWEC) holds a current DES rehabilitation permit (**Permit #WA0027769**), with an extended authority issued by the Department of Environment and Science specifying that the holder may take, keep, or use an animal whose habitat is about to be destroyed by human activity.

3 METHODOLOGY

3.1 Desktop Review

Prior to commencing the survey, all previous surveys and management plans related to the site were reviewed, as well as extensive desktop research of the intended site. The results of the desktop review allow the survey to be designed to target the significant species most likely to be encountered within the proposed survey location. Benefits of the desktop review prior to commencing the survey included:

Increased knowledge of the site by understanding;

- The overall habitat value,
- Range of habitat features,
- Floral structural complexity,
- Available water and food sources.

3.1.1 Regulated Vegetation Management

Land clearing in Queensland is regulated under the *Land Act 1994* and the vegetation management framework. To ensure this site will not have detrimental environmental impacts to the local biodiversity appropriate vegetation mapping was downloaded from Queensland Spatial Catalogue (The State of Queensland (Department of Resources) 2021) for viewing in ArcGIS. Vegetation management regional ecosystem map – version 13.1 (The State of Queensland (Department of Resources) 2023) was used to establish the Regional Ecosystems (RE's) on site.

3.1.2 Koala Habitat Planning and Management

Nature Conservation and Other Legislation (Koala Protection) Amendment Regulation 2020 is an overarching state planning instrument that regulates new development at the development assessment stage. The new koala planning framework is based upon scientifically based, consistent koala habitat mapping. The framework applies consistently across SEQ and establishes where clearing may be prohibited, where it is assessable by the State, where koala conservation outcomes will be considered by local governments and what exemptions may apply.

Southeast Queensland Koala Conservation Strategy 2019-2024 data package (Department of Environment and Science 2021) was utilised to discover the vegetation status relevant to koalas on site.

3.1.3 Significant Fauna Species List

A species list was collated by a suitably qualified ecologist, sourced from the Queensland Government WildNet Database (2021). This established the significant species with confirmed sighting records since 1980, within a 2 km radius of the central coordinates of the site.

3.2 Survey Planning

The survey methodology considered the following aspects:

- Size of the survey site
- Timeframes
- Access
- Workplace Health & Safety
- EVNT Native species confirmed- terrestrial/ arboreal
- Feral species
- Complexity of potential breeding places
- Marking of potential habitat features.

The methodology used for this survey was the active diurnal search methodology incorporating a meandered pattern. This method was suitable for the large survey area with complex habitat and time constraints.

The main objective of this survey was to locate any active or potential native fauna breeding places and high value habitat features.

The extent was surveyed by a suitably qualified person.

The number of meanders completed depended on the vegetation community and the number of habitat features present within the site. During the survey, photographs of unidentified scat, tracks and signs were taken, researched, peer reviewed, and identified using the appropriate reference materials.

3.3 Pre-Clearance Survey

Site was surveyed by a suitably qualified ecologist on 17th of September 2024 which included ground-truthing via meandering transects.

The purpose of the survey is to record the sites overall habitat value, significant habitat features, vegetation connectivity within the site and surrounding lots, fauna signs and opportunistic fauna sightings and the site's suitability for the significant species likely to occur in the area.

A thorough aural/visual fauna survey was conducted including a systematic traverse throughout the site searching for fauna individuals and habitat features.

The following habitat features are considered significant and were recorded if observed:

1. Tree hollows (branch and crown)
2. Native wildlife nests (stick nests)
3. Burrows (feeding burrows)
4. Fallen/felled timber
5. Thick groundcover
6. Fissured bark
7. Rocky outcrops
8. Aquatic habitat

9. And flora species considered Koala habitat trees under the Nature Conservation and Other Legislation (Koala Protection) Amendment Regulation 2020.

3.4 Fauna Survey Methods

The methods presented below were as part of the fauna field survey:

3.4.1 Animal Signs

Some native wildlife leave scat, tracks and scratches that can be identified and are described by Barbara Triggs (2004). These indicators should be used to provide evidence for identification without an actual physical sighting.

3.4.2 Diurnal Bird Survey

This non-intrusive active area search provides a census of the avian biodiversity and abundance within the survey site. This survey technique requires a skilled observer with relevant experience in local bird species and bird calls. Site transects are traversed slowly shortly after dawn when birds are most active. Avoid disturbing nesting birds during the survey.

3.4.3 Amphibian Survey

Systematically designed active searches should be conducted for frogs and frog calls within the site area, in addition suitable habitat such as streams, wetlands and other water bodies should be targeted.

This survey requires experienced observers to accurately identify species. The following attributes/conditions need to be recorded/adhered to:

- Length and type of area surveyed
- Time spent conducting the survey
- Weather conditions
- Avoid disturbing breeding sites
- Follow all the recommendations in the “Technical Manual, Wildlife Management, Interim hygiene protocol for handling amphibians” (2008)
- Avoid handling animals where possible or minimise the time spent handling any particular animal.

All animals are to be returned to the exact location it was captured from, all animals are to be released as soon as they have been identified. If load reduction trapping of waterbodies is necessary, it will be conducted prior to dewatering.

3.4.4 Koala Survey

The Spot Assessment Technique was undertaken, as recommended in the *EPBC Act* Referral Guidelines for the Endangered Koala (DoE 2013). This technique involved faecal pellet searches of a 100 cm radius around selected trees at each Spot Assessment Technique site. The method applied was randomly selecting the centre tree (from a randomly generated location) and

searching under both potential food and shelter trees (i.e., not limited to trees of the *Eucalyptus*, *Corymbia*, *Angophora* or *Lophostemon* genera), based on evidence presented in Woosnam-Merchez *et al.* (2012). Note: During the fauna pre-clearance survey smooth bark trees were examined for scratch marks, in the event koala scratch marks were evident this assessment technique was conducted, and data logged.

A drone using an infrared camera was also used (16th and 17th of October) to investigate the presence of any koalas within the proposed clearing works. One koala was detected, and location was captured on both drone survey dates. **APPENDIX 1** displays details of these GPS captures and associated koala images.

4 RESULTS

4.1 Desktop Review

4.1.1 Regulated Vegetation Management

Majority of clearing footprint is mapped as non-remnant vegetation, with some small regions of RE's 12.9-10.16 (Of concern), 12.9-10.2 (Least concern) and 12.9-10.7 (Of concern) high value regrowth areas (**FIGURE 2** and **TABLE 2**).

TABLE 2 - REGIONAL ECOSYSTEMS

RE	VM Act Status	Short Description
12.9-10.16	Of Concern	Less than 0.01 ha, high value regrowth area, <i>Araucarian microphyll</i> to notophyll vine forest on Cainozoic and Mesozoic sediments
12.9-10.2	Least Concern	0.04 ha, high value regrowth area, <i>Corymbia citriodora subsp. variegata</i> +/- <i>Eucalyptus crebra</i> open forest on sedimentary rocks
12.9-10.7	Of Concern	0.02 ha, high value regrowth area, <i>Eucalyptus crebra</i> +/- <i>E. tereticornis</i> , <i>Corymbia tessellaris</i> , <i>Angophora spp.</i> and <i>E. melanophloia</i> woodland on sedimentary rocks
Non-rem	NA	19.72 Ha, Non-remnant vegetation

4.1.2 Koala Habitat Planning and Management

The site contains areas of Core Koala Habitat.





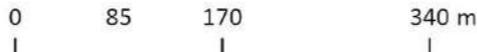
	Site Context	<p>N</p> 	<p>Legend</p> <ul style="list-style-type: none"> The Site QLD Cadastral MSES - Regulated Vegetation (intersecting a watercourse) Flora Survey Trigger Map
	<p>787 Ripley Road, South Ripley, QLD</p> <p>Spatial Reference Name: GCS WGS 1984</p>	<p>Scale: 1:5,121</p> 	

FIGURE 2 - SITE CONTEXT

4.1.3 WildNet Database

This database provided a list of 18 fauna species previously recorded in the area, of which included 1 Endangered species (**TABLE 3**).

4.1.4 Significant Species Field Guide

The assessment of the likelihood of each species' occurrence on site was determined from the desktop assessment and field surveys and classified as 'low', 'moderate' and 'high'.

There is appropriate habitat at this site for koala, central greater glider and powerful owl, however no evidence of these species was observed during the pre-clearance survey. Therefore, these species are deemed a moderate chance for encountering. The habitat is not optimal for the glossy black-cockatoo and grey-headed flying-fox so there is a low likelihood for these species to be disturbed during works.

The following page is presented in such a format so that it can be printed and taken on site prior, during and post clearing as a field guide for the site-specific significant species likely to be encountered.

SIGNIFICANT SPECIES

787 RIPLEY ROAD SOUTH, RIPLEY, QUEENSLAND

Field Guide for Significant Species likely to be encountered on site

These animals were returned in the WildNet search for a 2 km radius of the site.

TABLE 3 - SIGNIFICANT SPECIES

Koala
(*Phascolarctos cinerus*)



NC Act 1992: ENDANGERED
EPBC Act 1999: ENDANGERED

Likelihood: **MODERATE**

Size: 60 – 85 cm

Habitat: Open and closed forest generally dominated by *Eucalyptus*, *Corymbia*, *Angophora* or *Lophostemon* trees, usually near a watercourse.

Breeding: Do not require specific location for breeding, but as they are solitary animals, they require large, connected habitat that overlaps other individuals home ranges, to encounter other sex for mating.



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Queensland 4510 Australia

SITE CONTEXT - SIGNIFICANT SPECIES

(PAGE 1 OF 1)

CLIENT:
Shadforth Civil Contractors

PROJECT CODE:
674-SCC2409-D

CREATED BY: AE

APPROVED BY: YV

DRAWING NO:
674-SCC2409-D
_WPMP_1

ISSUE

REV.0

DESCRIPTION

FOR USE

DATE

OCT 24

4.2 Survey Results

The landscape within the clearing footprint of this site varies between undulating hills of previously cleared vegetation, with scattered immature regrowth and short grass (**FIGURE 3**), to patches of dense regrowth and ground cover of dry leaf litter (**FIGURE 4**), to wet eucalypt woodland with tall mature trees and thick grass cover (**FIGURE 5**), and to dry rocky embankments with shrubs (**FIGURE 6**).



FIGURE 3 - SITE OVERVIEW 1



FIGURE 4 - SITE OVERVIEW 2



FIGURE 5 - SITE OVERVIEW 3



FIGURE 6 - SITE OVERVIEW 4

4.2.1 Habitat features & fauna signs

This site included an abundance of hollow bearing trees (11 Trees, 14 small, 11 medium & 2 large hollows), 5 arboreal termitaria's, a total of 3 large trees (DBH > 80 cm), and one water body

TABLE 4 and **FIGURE 7** display the fauna signs and habitat features recorded during the survey, and the numbers listed in the table correspond to the figure. **APPENDIX 1** displays details of these features and associated site images.

TABLE 4 - SUMMARY OF SURVEY RESULTS

Habitat features	Count
Arboreal termite mound	5
Dense vegetation	1
Hollow-bearing tree	11
<i>Small hollows</i>	<i>14</i>
<i>Medium hollows</i>	<i>11</i>
<i>Large hollows</i>	<i>2</i>
<i>Total number of hollows</i>	<i>27</i>
Large tree (>80cm DBH)	3
Water body	1
Fissured bark	1
Stag tree	1
Woody debris	0
Total	23
Fauna signs	Count
Stick nest	0
Scratch Marks	1
Scat	1
Tracks	2
Diggings	1
Total	5
Grand Total	28

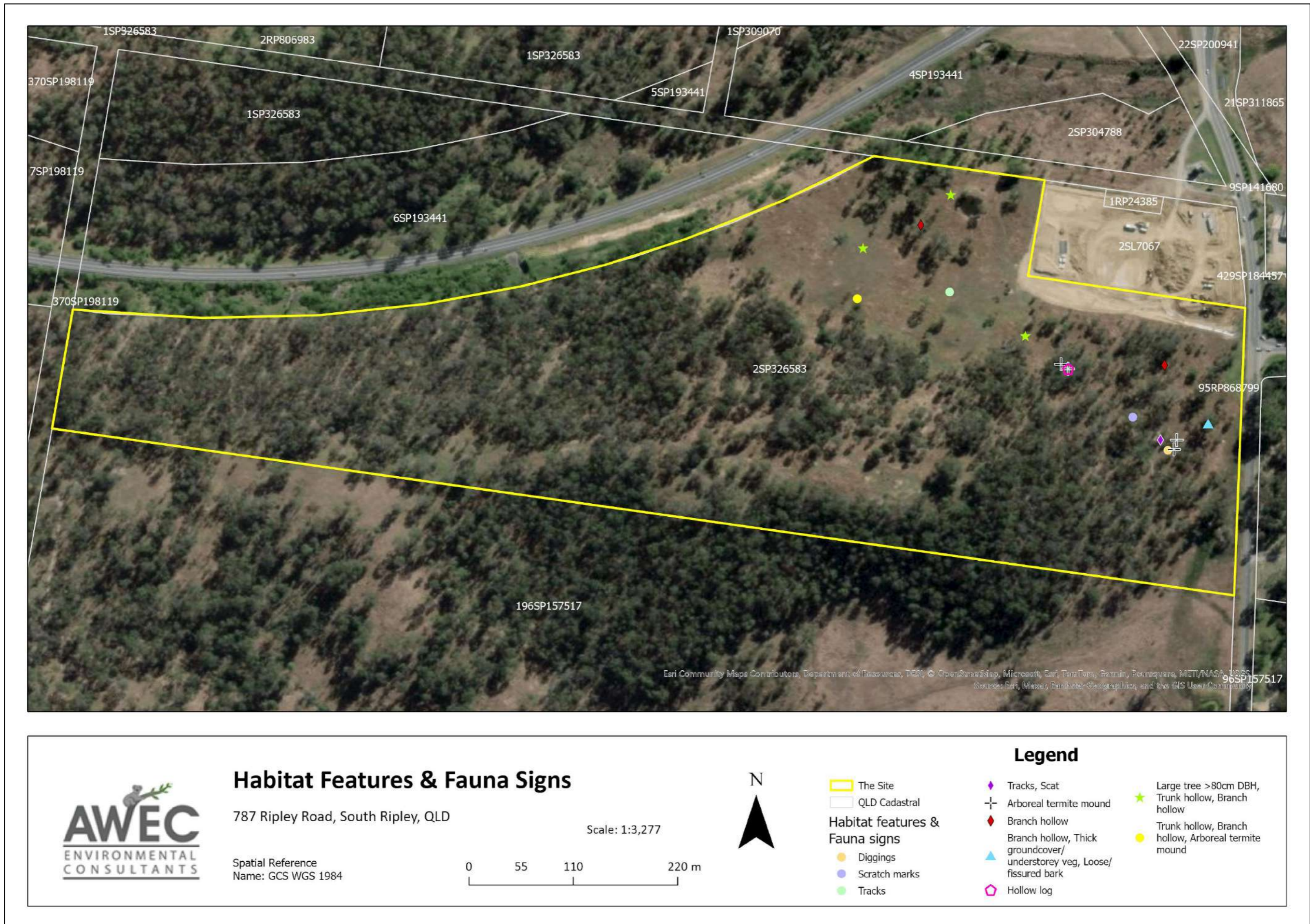


FIGURE 7 - SURVEY RESULTS

4.2.2 Fauna assemblage

The fauna community observed on site included Least Concern bird species (TABLE 5).

TABLE 5 - SIGHTED FAUNA BIODIVERSITY

Common name	Scientific name	Conservation Status
Bird species		
Noisy Miner	<i>Manorina melanocephala</i>	Least Concern
laughing kookaburra	<i>Dacelo novaeguineae</i>	Least Concern
Torresian crow	<i>Corvus orru</i>	Least Concern
Australian Magpie	<i>Gymnorhina tibicen</i>	Least Concern
Rainbow Lorikeet	<i>Trichoglossus moluccanus</i>	Least Concern
Sulphur-Crested Cockatoo	<i>sulphur-crested cockatoo</i>	Least Concern
Indian Miner	<i>Acridotheres tristis</i>	Least Concern
Masked Lapwing	<i>Vanellus miles</i>	Least Concern

5 IMPACTS TO FAUNA

5.1 Proposed Disturbance

This development proposes to clear 19.78a Ha of vegetation, which majority is mapped as non-remnant vegetation and includes 3 large trees (DBH > 80 cm), 5 arboreal termitaria's, 1 stag tree with fissured bark, 27 hollows & 1 waterbody.

5.2 Prospective Implications for Fauna

The development works will potentially impact:

- Ground-dwelling reptiles and mammals inhabiting the dense undershrub and piles of woody debris,
- Arboreal mammals, reptiles and birds inhabiting trees and tree hollows,
- Wildlife survivability, species may become injured or killed during clearing,
- Alter animal behaviour due to clearing activities, like loud machinery, lights, dust,
- Water quality due to run off from works,
- Fauna access to foraging resources.

Specific implications for fauna are likely to include:

- Loss of hollows for hollow-utilising species on site, which could include listed significant species the powerful owl and the central great glider who rely on very old trees with large hollows for breeding. So the loss of hollows could affect their survivability.
- Loss of suitable habitat for the koala. Although no evidence of koalas was noted at this site, the removal of this vegetation could affect local koala's habitat connectivity.

To minimise the implications of this development upon local wildlife, the measures outlined in the associated AWEC report "Wildlife and Habitat Mitigation Plan" should be adhered to.

6 CONCLUSION

Australia Wide Environmental Consultants (AWEC) were commissioned by Shadforth Civil Contractors to compile a Wildlife and Habitat Mitigation Plan for the development of 787 Ripley Road South, Ripley, Queensland.

A suitably qualified and licenced fauna spotter/catcher surveyed the site on 17th of September 2024.

The survey concluded that, the site showed moderate evidence of use by local wildlife but did display suitable habitat for a variety of species. Potential impacts that could occur because of these works include displacement of species from refuge habitat, loss of foraging habitat, wildlife survivability (including several local significant species, that were not identified at the site, but their appropriate habitat was, water quality).

The fauna management measures within the associated Wildlife and Habitat Mitigation Plan are to be followed to minimise impact to local native fauna.

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8 Appendices

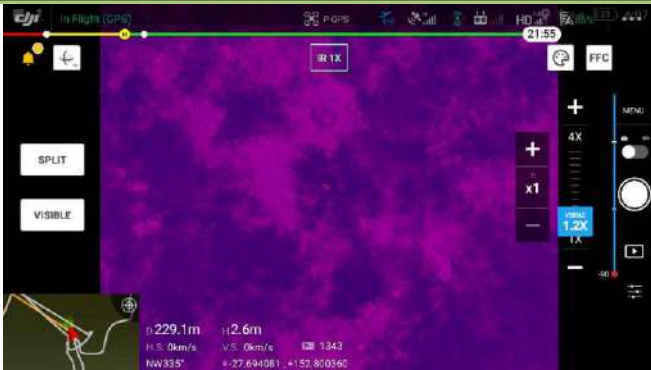

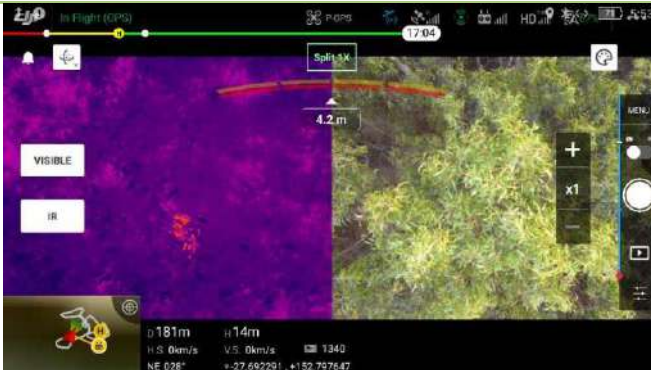
8.1 Details of habitat features & fauna signs


#	Description	Latitude	Longitude
1	Branch hollow	-27.69196792	152.8026437
2	Branch hollow, Thick groundcover/ understorey veg, Loose/fissured bark	-27.6925148	152.8030564
3	Diggings	-27.6927723	152.8026761
4	Arboreal termite mound	-27.6926774	152.8027598
5	Arboreal termite mound	-27.6927664	152.8027337
6	Tracks & Scat (Macropod)	-27.6926763	152.8026054
			
7	Scratch Marks (Sugar/squirrel Glider)	-27.6924614	152.8023427
8	Arboreal termite mound	-27.69195901	152.801664
9	Arboreal termite mound	-27.6920022	152.8017301
10	Hollow log	-27.6920034	152.8017306

#	Description	Latitude	Longitude
			
11	Large tree >80cm DBH, Trunk hollow, Branch hollow	-27.6916906	152.8013258
12	Tracks	-27.6912729	152.8006069
			
13	Large tree >80cm DBH, Trunk hollow, Branch hollow	-27.6908585	152.7997878
14	Trunk hollow, Branch hollow, Arboreal termite mound	-27.6913384	152.799731

#	Description	Latitude	Longitude
15	Branch hollow	-27.6906396	152.8003343
16	Large tree >80cm DBH, Trunk hollow, Branch hollow	-27.6903534	152.8006183

8.2 Details of Koala presence and locations

Date	Description	Latitude	Longitude
			
			
16/10/24	Koala within clearing extents	-27.6929676	152.7983626
			
17/10/24		-27.6923097	152.7976949

Date	Description	Latitude	Longitude
			
	<p>Same Koala moved locations, still within clearing extents</p>		

674-SCC2409-D

WILDLIFE HABITAT IMPACT MITIGATION PLAN

787 Ripley Road, South Ripley, QLD 4306



Prepared for:
Shadforth Civil Contractors

Delivered:
October 2024



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Revision History

Rev. #	Issue Date	Revision Details	Prepared By	Reviewed By	Approved By
0	October 2024	For Use	Ayden Ellis	Yolande Venter	Yolande Venter
1					
2					

Document Approval

Approved:	Name:	Signature:	Date:
Company Director	Yolande Venter		October 2024

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1 INTRODUCTION

1.1 Background

Australia Wide Environmental Consultants (AWEC) were commissioned by Shadforth Civil Contractors to compile a Wildlife and Habitat Mitigation Plan for the development of 787 Ripley Road South, Ripley, Queensland, 4306.

Project site is located on Lot 2 on SP326583, within the Ipswich City Council. This clearing of this development is for residential subdivision (**FIGURE 1**).

1.2 Ecologist and Qualifications

The AWEC nominated Ecologist is Yolande Venter who is a degree qualified ecologist/environmental coordinator with over 15 years of field experience within the ecology and environmental sectors.

1.3 Scope

This report will aim to minimise and mitigate any risks to fauna raised in the Wildlife Protection and Management Plan and will include:

1. Measures required to be completed to minimise wildlife and habitat impacts during operational works.
2. Wildlife capture and removal plan.
3. Contingency plan for wildlife requiring euthanasia, other veterinary procedures, or captive care.
4. Wildlife storage and housing plan
5. Wildlife release and disposal plan.
6. Post works measures to minimise impacts on wildlife.



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	<p>Site Context 787 Ripley Road, South Ripley, QLD Spatial Reference Name: GCS WGS 1984</p>	<p>Scale: 1:5,121</p>		<p>Legend</p>	<ul style="list-style-type: none"> The Site QLD Cadastral MSES - Regulated Vegetation (intersecting a watercourse) Flora Survey Trigger Map
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FIGURE 1- SITE CONTEXT

2 STATUTORY REQUIREMENTS AND GUIDELINES

See **TABLE 1** below for the relevant statutory requirements and guidelines.

TABLE 1 - STATUTORY REQUIREMENTS AND GUIDELINES

Legislation	Purpose of Legislation	Impact on Project personnel
Animal Care and Protection Act 2001	Animal Welfare	Outlines that animal ethics approval is needed for research, survey and/or monitoring involving vertebrates, where activities such as trapping, census leading to disturbance of animals (such as spotlighting or call play-back), abnormal interruption of behaviour or marking/tagging are involved.
Australian code for the care and use of animals for scientific purposes 8 th edition (2013)	Ethical framework for animals used for scientific purposes	Governing principles set out in the Code provide guidance for investigators, teachers, institutions, animal ethics committees and all the people involved in the care and use of animals for scientific purposes.
Biosecurity Act 2014	The <i>Biosecurity Act 2014</i> provides a framework for an effective biosecurity system for Queensland, to ensure the safety and quality of agricultural inputs, and to align responses to biosecurity risks in the state with national and international obligations.	Under the <i>Biosecurity Act 2014</i> , pest species must not be kept, fed, given away, sold, or released into the environment without a permit. Under the Biosecurity Act, everyone has a general biosecurity obligation to take reasonable and practical steps to minimise the risks associated with restricted plants and animals.
Code of Practice-Care and rehabilitation of orphaned, sick or injured protected animals by wildlife carers(2013)	Provides guidelines on the rehabilitation and care of wildlife	Detailed guidelines, in regards to hygiene, housing, capture and release, euthanasia and relevant legislation
Environmental Protection and Biodiversity Conservation Act 1999	The <i>EPBC Act 1999</i> focuses Australian Government interests on the protection of matters of national environmental significance, with the states and territories having responsibility for	To comply with the relevant sections of the Act that relate to matters of national significance which are present in the vicinity of the project works.

Legislation	Purpose of Legislation	Impact on Project personnel
	matters of state and local significance.	
Environmental Protection Regulation 2019	Gives legislative support to various national guidelines, plans and Australian Standards. This regulation also outlines requirements for the management of fauna and flora.	To abide by the regulations within the DES.
Fisheries Act 1994	The main purpose of the <i>Fisheries Act 1994</i> is to provide for the use, conservation and enhancement of the community's fisheries resources and fish habitats in a way that seeks to apply the principles of ecologically sustainable development.	Outlines fish habitats and fish movement and migration (regulation of waterway barriers). Guidelines on commercial, recreational and indigenous fishing.
Nature Conservation (Wildlife Management) Regulation 2006	This Regulation provides for the management of wildlife (including taking, keeping and using wildlife including protected plants).	Provides guidance for the management of wildlife on site, particularly in relation to the interference with native wildlife during the clearing process.
Nature Conservation (Wildlife) Regulation 2006	This Regulation lists the plants and animals considered presumed extinct, endangered, vulnerable, rare, common, international, and prohibited. It discusses their significance and states the declared management intent and the principles to be observed in any taking and use for each group.	List those animals that may be potentially found on sites being developed as part of the project and limitations for management.
Nature Conservation and Other Legislation (Koala Protection) Amendment Regulation 2020	Guideline for identifying and managing koala habitat	Provides guidance on where fauna spotter catchers are legally required and how they are to manage koala habitat
Nature Conservation Other Legislation Act 2016	The Act provides for the legislative protection of Queensland's threatened biota. It is aligned with the IUCN redlist which categorises biota into their current status in the wild.	To comply with the relevant sections of the Act and regulations and the Environmental Authority administered by the DES.

Legislation	Purpose of Legislation	Impact on Project personnel
Queensland Hygiene protocol for handling amphibians	Protocol for handling amphibian species	Outlines how to handle and manage amphibian species to prevent the spread of diseases among specimens and colonies.
Seqwater-Guideline-Stranding and Salvage	Fish and The purpose of this guidance document is to ensure native fish recovery operations are conducted in a timely and safe manner to minimise or eliminate loss of fish from stranding.	Guideline on managing aquatic fauna during dewatering works.
Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (2018)	Guidelines for Fauna Surveys	Detailed guidelines on designing a survey, the different survey methodologies and the ethical considerations that need to be made for each methodology.

Australia Wide Environmental Consultants (AWEC) holds a current DES rehabilitation permit (**Permit #WA0027769**), with an extended authority issued by the Department of Environment and Science specifying that the holder may take, keep, or use an animal whose habitat is about to be destroyed by human activity.

3 OCCUPATIONAL HEALTH AND SAFETY

Before commencement of work on the site all inductions including client, inductions must be completed; all onsite requirements outlined in the inductions must always be adhered to.

Before handling any venomous snakes, you must have completed a Venomous snake relocation course, and an acceptable level of attainment must have been achieved.

3.1 Personal Protective Equipment (PPE)

The PPE required on site must always be worn. As a minimum a long sleeve high visibility work shirt, long work pants, hard hat with sun brim, lace up work boots, safety glasses and suitable gloves for your planned task are to be worn.

3.2 First Aid

It is a requirement of your position as a Fauna Handler that you have a current first aid certificate and first aid kits have been placed in every vehicle for your use. If working in the field and are situated away from your site vehicle you must carry a snake bit kit.

3.3 Biosecurity/ Hygiene Measures

Biosecurity/hygiene measures include-

Zoonotic diseases (those that affect both animals and humans and may be passed between them) are known to be present in Australian native wildlife e.g., Australian bat lyssavirus. Diseases may also be transferred between animals. Fauna handlers should therefore take basic precautions to prevent animal-animal, animal-human and human-animal transfer of disease. Such precautions should include the following:

- High levels of personal hygiene.
- Using personal protective equipment such as gloves, boots etc.
- Not eating, drinking, or smoking while handling wildlife, also disinfecting before eating or drinking.
- Washing field clothes and equipment that has encounter animal's blood or body fluids and cleaning all trapping equipment between surveys.
- Basic first aid for treatment of cuts, bites, and scratches.
- Observe conditions in Queensland Hygiene protocol for handling to avoid spreading Chytrid fungus.
- Obtaining vaccinations against Australian bat lyssavirus before handling bat species.
- Knowledge and familiarisation with C3 bat protocol
- Should anyone who handled animals become ill within two months of a survey, the attending medical practitioner should be informed of the potential exposure to zoonosis.

3.4 Working around plant

3.4.1 Placement

When working besides plant (Bulldozers and Excavators) a clear line of sight to the machine operator is required. For the operator to maintain line of sight it is important to be on the correct side of the machine, for excavators this is the left side (operator cabin side). For bulldozers, the correct place is on either side, not in front or behind the machine and always maintain positive communication with the operators. When vegetation is being felled it is important to stand well clear (but still within sight of the operator). If further inspection of a tree is required, the operator must be contacted and place the machine in the “safe” position (Stationary with the bucket or blade on the ground) before you can approach the tree.

3.4.2 Clearing zone

Clearing zone is defined as that area within two tree lengths (50 metres) from the operating machine. This zone is a hazardous area, care must always be taken while working within this zone. The clearing zone is where most of the spotter/catcher’s work occurs.

3.4.3 Communication

Communication with the plant operator is to be made via hand held UHF radios. Radios must always be charged and carried on your person. Clear communication with the

operator is essential to ensure safety and the required co-operation is achieved. The operator must be informed upon the sighting of any wildlife and of your intentions to catch the animal; you require positive communication before approaching the machinery.

4 IMPACTS TO FAUNA

4.1 Proposed Disturbance

This development proposes to clear 19.78a Ha of vegetation, which majority is mapped as non-remnant vegetation and includes 3 large trees (DBH > 80 cm), 5 arboreal termitaria's, 1 stag tree with fissured bark, 27 hollows & 1 waterbody.

4.2 Prospective Implications for Fauna

The development works will potentially impact:

- Ground-dwelling reptiles and mammals inhabiting the dense undershrub and piles of woody debris,
- Arboreal mammals, reptiles and birds inhabiting trees and tree hollows,
- Wildlife survivability, species may become injured or killed during clearing,
- Alter animal behaviour due to clearing activities, like loud machinery, lights, dust,
- Water quality due to run off from works,
- Fauna access to foraging resources.

Specific implications for fauna are likely to include:

- Loss of hollows for hollow-utilising species on site, which could include listed significant species the powerful owl and the central great glider who rely on very old trees with large hollows for breeding. So the loss of hollows could affect their survivability.
- Loss of suitable habitat for the koala. Although no evidence of koalas was noted at this site, the removal of this vegetation could affect local koala's habitat connectivity.

To minimise the implications of this development upon local wildlife, the following fauna management and mitigation measures should be followed.

5 FAUNA MANAGEMENT

The following pages are designed to be printed and taken into the field. They aim to inform on-site crew of requirements they must adhere to in order to minimise impact to fauna during this project.

5.1 FAUNA MANAGEMENT MEASURES - CLEARING WORKS

787 RIPLEY ROAD SOUTH, RIPLEY, QUEENSLAND

5.1.1 Pre-clearing

Objective: Mitigate the risk to native fauna
 Responsibility: Fauna Spotter Catcher (FSC)
 Timing: Pre-construction

Prior to Work Commencing	
Fauna trapping conducted 1-3 days prior to clearing, aimed at ground-dwelling and arboreal species.	
Arboreal mammals captured relocated into suitable nest boxes	
Ground inspection morning prior to clearing	
Mark habitat features and trees	
Inform clearing crew at pre-start meeting of marked trees, clearing process and approved requirements of FMP	
Any fauna sighted prior to clearing should be relocated	
Where koalas may be present, specific inspection should be conducted the day before, by foot and/or drone	

5.1.2 Fauna Capture and Release

Objective: Mitigate the risk to native fauna
 Responsibility: FSC
 Timing: All Phases

Where possible, sighted fauna must be captured, responsibly stored, and relocated. See the following section for appropriate capture and storing methods.
 Koalas, however, cannot be captured, handled, stored, or removed from site and must be managed in accordance with legislation (**SECTION 5.1.7**).

5.1.3 Fauna Handling Procedure

Various methods can be used to safely capture native wildlife in the field. However, capturing wildlife poses a risk to the handler's personal safety and could also cause unnecessary stress and or injury to the animal involved. Before capturing any wildlife: plan your capture, handle the animal as per training and have the correct equipment available.

Capture myopathy is a disease associated with the capture or handling of many species of mammals and birds. Therefore, minimising the stress on any captured fauna is a priority. Emphasis should be on prevention, as treatment of wild fauna has a very low success rate.

The following principals should be applied:

- Remove stressors if possible. Place in a quiet, dark area, in an appropriate temperature for the species until able to be safely released.
- Treat shock if present. Ensure adequate ventilation, replace fluids, correct acidosis, and keep the animal warm.
- Restriction of free movement as a result of muscle injury means a careful watch must be kept on fluid balance. Many animals with capture myopathy will suffer from exposure and /I one of the common features in hot environments is dehydration. Balanced electrolyte replacers may be needed.
- If possible, restrict movement of the animal to reduce the chance of rupturing necrotic muscles.
- Minimizing duration of exposure to stressors. High stress situations include frequent handling, repeated blood sampling, or being left in exposed conditions (such as in a trap enclosure without natural cover)
- If animal is orphaned or injured, store in a secure manner to prevent unnecessary stress or further injury.

5.1.4 Species Specific Handling Procedures

Best practise to avoid injury for crew and wildlife:

Possums and Gliders

Equipment:	Gloves when practical
Technique:	Grab tail and around back of neck
Secure in:	Pet carrier or calico bag; knotted or zip tied. Where multiple gliders are found in one hollow, they should be housed in one large calico bag.

If possum/glider presence is confirmed within a tree by using an EWP or inspection camera, the FSC will decide the best and most practical method for removal. As possums are predominantly nocturnal, they should be released after sunset.

Bats and Flying-foxes

Bats can carry a disease called Lyssavirus which is closely related to the common rabies and therefore should not be handled by staff who are not immunised. If handlers are bitten or scratched it should be reported immediately.

Equipment:	Always gloves, flying-foxes require heavy duty gloves
Secure in:	Calico bag; knotted or zip tied. Where multiple animals are found in one hollow, they should be stored in the same calico bag.

Venomous and Non-venomous Snakes

Caution should be taken when handling non-venomous snakes. If the identification can't be confirmed prior to handling, then the snake should be treated as if it is venomous. Do not handle venomous snakes unless you have completed a venomous snake handling course with a suitably qualified trainer and have been approved by Joel Keady to handle venomous snakes.

Equipment:	Where practical snake hoop bag/hook and bag
Technique:	Where possible hook and bag technique, where this is not possible a <i>non-venomous</i> snake can be restrained at the base of the skull with a thumb and forefinger either side of the head and to the rear of the lower jaw.
Secure in:	Snake hoop bag and ziptied.

When a snake is sighted, warn others of its location, and ask them to stand back as you capture and secure the animal. The bag should be placed in safe location and everyone should be made aware not to touch any bags containing fauna. All containers or bags containing a venomous animal should be labelled and closed using zip ties.

Monitors

Equipment:	Catch bag, and where practical gloves.
Technique:	Caught at base of tail, place bag or towel over head, which will allow handler to grab back of neck. Must align this arm along the back of the monitor before lifting. Tilt head/neck back slightly and hold away from body. Beware the strong tail which will be used as defence.
Secure in:	Should be released straight away or when not possible in a suitable sized pet carrier or bag.

Serious caution should be taken with these animals, as they are strong and cause injuries- bites can easily result in severe infections.

Frogs

The spread of disease, such as the chytrid fungus, may occur as a result of handling frogs. Unnecessary handling should be avoided, and the specimen released as soon as possible. When handling amphibians, the handler should wear unused disposable gloves or capture and handle frogs in single use lightweight plastic bags. Bare hands may be used provided they are wiped before each capture with a sterilising alcohol-based hand disinfectant.

 <p>Australia Wide Environmental Consultants ABN 67 618 756 291 T: 0458 293 759 E: admin@awenv.com.au 307 Bishop Road, Beachmere Queensland 4510 Australia</p>	<p>FAUNA MANAGEMENT PLAN - WRITTEN INFORMATION</p> <p>(PAGE 1 OF 5)</p>	<p>CLIENT: Shadforth Civil Contractors</p> <p>PROJECT CODE: 787-SCC2409-D</p>	CREATED BY: AE	ISSUE	DESCRIPTION	DATE
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FAUNA MANAGEMENT MEASURES - CLEARING WORKS

787 RIPLEY ROAD SOUTH, RIPLEY, QUEENSLAND

5.1.1 Clearing and Grubbing

Objective: Reduce risk to fauna during clearing
 Responsibility: FSC & construction/clearing crew
 Timing: Earthworks

During Disturbance Works	
FSC must be present for all clearing and grubbing to supervise and respond to fauna encounters	
FSC must hold appropriate rehabilitation permit	
FSC must conduct visual inspection of clearing area daily	
Clearing sequentially towards vegetation in two stages (See Error! Reference source not found.)	
First clearing stage: non-habitat trees, cleared and stockpiled for mulching.	
Second clearing stage: habitat trees, min. 24 hours later, preferably afternoon, assessed for best method (camera, climber, EWP, drone).	
Habitat trees are to be inspected for animal inhabitants	
Occupied trees must be blocked off and fauna relocated	
Trees with unconfirmed occupancy must be soft felled to reduce fauna injury and habitat damage	
Injured animals should be either humanely euthanised or taken to local wildlife hospital or carer (See SECTION 6.1.5).	

Clearing must occur towards vegetated areas to allow for wildlife to self-relocate into surrounding vegetation and prevent isolating fauna.



FIGURE 2- ADVISED CLEARING DIRECTION

5.1.2 Checking Hollows

Habitat trees of high importance should be felled last, after surrounding less important vegetation has been cleared to allow easy access of special plant and equipment (such as an EWP), and to allow unhindered lowering of hollow bearing limbs.

If ground conditions do not allow the use of an EWP, a tree climber is to be used to remove the hollows prior to the tree being softly felled using on site machinery.

Whenever possible, the integrity and structure of tree hollows contained in trees which are to be removed should be preserved. These should be relocated to appropriate habitat retained on the site, or to appropriate habitat close to the site.

5.1.3 Second Clearing Stage

This process is detailed following the step-by-step basis below:

1. FSC will work with a chainsaw operator and use an EWP to inspect and remove habitat resources (hollows, dreys etc) prior to felling. Usually with a torch, however fibre-optic camera/bore-scopes can be useful for deep hollows.
2. If fauna is located within a hollow, a piece of towel or rag will be firmly placed in the entrance to prevent the wildlife from escaping. If an occupied ringtail possum drey is encountered, the FSC should quietly approach (i.e., avoid contacting other branches) the drey in the cherry-picker bucket and physically capture the possum by placing the entire drey in a catch bag or only the possum if it emerges from the drey.
3. Once the hollow entrance has been secured the arborist or FSC will cut the entire hollow limb off below the cavity where the branch remains solid. In circumstances where a hollow continues into the main stem of the tree, a small window will be carefully cut into the hollow, allowing the FSC to plug the hollow above and below the window, then the hollow limb removed and lowered to the ground in sections.
4. When the fauna has been safely secured within its hollow, the entire limb can then be placed in the cherry-picker bucket or lowered to the ground using ropes depending on the size of the limb.
5. This limb will then be placed in a cool, quiet location until translocation to the recipient habitat site, when at dusk the hollow entrance is re-opened to allow the fauna to emerge of its own accord.

5.1.4 Releasing and Relocating

- Relocation and release must consider the following:
- Suitable habitat with an adequate food and water supply.
- Appropriate weather, season, and time of day for species.
- Appropriate social group. Some animals fare better if released into social groups.
- Within 1km of the site, as per DES guidelines, in a protected location.
- If animals can be re-released on the clearing site once clearing is complete the following criteria must be followed:
- Sufficient habitat retained to support animal's niche, considering factors such as: vulnerability to predation; availability of nesting sites, hollows or microhabitats and the availability of water and sufficient food sources.
- Sufficient connectivity between habitat allowing for normal ecological processes such as immigration, emigration, recruitment, and dispersal.
- Habitat blocks and corridors are of sufficient size to maintain ecological integrity and effectiveness, considering likely edge effects.
- Long-term risk factors assessed and mitigated (E.g., risk from domestic animals, vehicles, swimming pools).

Injuries & Euthanasia

Sometimes euthanasia is required to end suffering of an injured animal. If this is required, it should be done promptly and humanely.

If injured animals have a reasonable chance of recovery, they should be taken to the closest vet for treatment. Any orphaned young or fauna with minor injuries (e.g., concussion) should be taken to the closest carer. Some animals for example koalas will require specialist care and the closest suitable care facility should be contacted.

Recommended Wildlife Surgery-

- Currumbin Wildlife Hospital, (07) 5534 0813
- RSPCA Wildlife Hospital, Wacol 1300 ANIMAL
- Wildcare Australia Inc (07) 5527 2444



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FAUNA MANAGEMENT PLAN - WRITTEN INFORMATION

(PAGE 2 OF 5)

CLIENT:
 Shadforth Civil Contractors

PROJECT CODE:
 787-SCC2409-D

CREATED BY: AE

APPROVED BY: YV

DRAWING NO:
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 _WHMP_2

ISSUE

REV.0

DESCRIPTION

FOR USE

DATE

OCT 24

FAUNA MANAGEMENT MEASURES - CLEARING WORKS

787 RIPLEY ROAD SOUTH, RIPLEY, QUEENSLAND

5.1.6 Reporting

Objective: Adhere to DES requirements
 Responsibility: FSC
 Timing: All Phases

Record these details for each captured animal	
Species	
Sex (M, F or Unknown)	
Approximate Age or Age Class (neonate, juvenile, sub-adult, adult)	
Time and date of capture	
Method of capture	
Exact point of capture (GPS coordinates)	
State of health	
Incidents associated with capture likely to affect health	
Veterinary intervention or treatments	
Time held in captivity	
Disposal method (euthanasia, translocation, re-release) m.	
Date and time of disposal	
Details of disposal (GPS points of release)	
For released animals, location relative to point of capture	

It is important that correct identification is made for record keeping purposes (SECTION 5.2.6). If a sighted specimen can't be identified an ecologist is to be contacted who will direct the onsite staff on the types of images they require to correctly identify the specimen.

5.1.7 Mulching Works

Objective: To reduce project impact on local fauna
 Responsibility: FSC & clearing crew
 Timing: Clearing works

During mulching works	
Identified hollows should be salvaged from trees and preserved	
Stockpiled vegetation should be inspected by FSC for fauna prior to removal.	

Stockpiled vegetation, topsoil and other materials can quickly become temporary habitat for animals displaced during the actual clearing and earthworks.

5.1.1 Koala Management

Objective: To protect local koala populations
 Responsibility: FSC & clearing crew
 Timing: All Phases

If a koala is observed within the site, a DES approved koala FSC must be on site to monitor the animal until it has self-relocated off site.

A DES approved koala FSC is a person who holds a relevant tertiary qualification, and/or who is experienced in identification and location of koalas in their natural habitat and has authorisation from DES.

DES approved Koala FSC must	✓
Be present at site of felling	
Identify koala occupied trees/overlapping trees	
Advise crew of precise locations of these trees	

The *Nature Conservation and Other Legislation (Koala protection) Amendment Regulation 2020* outlines that the following measures must be undertaken to minimise, reduce or mitigate impacts to koalas in potential koala habitat areas:

- Sequential clearing to assist fauna in relocating to nearby habitat on their own accord.
- No tree in which a koala is present and no tree with a crown overlapping a tree with a koala present will be disturbed.
- 50m buffer created around such tree - where works are seized until koala has moved off on its own accord.
- Where practical, a vegetation corridor is to be left, to allow koalas to self-relocate to a suitable area not in clearing zone.
- In areas containing a dominance of koala food trees and positively identified koala sightings and/or identified scat or scratch marks, a koala FSC is to be present during clearing activities.
- If a koala is not injured but refuses to move from the clearance area on its own accord after two days, the FSC will liaise with DES and negotiate appropriate methods for removal and relocation.

5.1.2 Native Beehive Relocation

Objective: To reduce project impact on local fauna
 Responsibility: FSC & clearing crew
 Timing: Clearing works

All native beehives of the genera *Tetragonula* (syn *Trigona*) and/or *Austroplebelia* are to be recovered during vegetation clearing works for relocation into the retained vegetation and/or recovered and "boxed up" (if damaged).

If a native beehive is located on site, its entrance is to be blocked off prior to sunrise. The extent of the beehive within the hollow is to be established using a fibre optic camera. The beehive is then to be cut out and both ends of the hive sealed off using treated wood. The beehive is then to be relocated to a suitable location and left-over night. The next morning at sunrise the entrance is to be opened.



FIGURE 3- EXAMPLE RELOCATED NATIVE BEEHIVE

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FAUNA MANAGEMENT MEASURES - CLEARING WORKS

787 RIPLEY ROAD SOUTH, RIPLEY, QUEENSLAND

5.2 Dewatering Management Measures

As part of this project a temporary flood bund will be created, the associated area will be subject to dewatering and a specific Aquatic Fauna Salvage Management Plan.

5.2.1 Pre-dewatering Phase

- At a minimum, works will be conducted under the following:
 - Rehabilitation Permit by appropriately qualified ecologists.
- Where significant waterbodies contain a high density of aquatic fauna, load reduction trapping will be conducted. A two day long trapping program will start once the dam is 40% dewatered. With a focus particularly on crustaceans and turtles, due to burrowing nature, making them difficult to find. Traps will also be used to reduce load of small fish and eels from the waterbody.
- The morning prior to dewatering commencing; fish load will be further reduced using scoop, dip nets and seine nets. Suitable release location has been selected based on its proximity to site, access, similar aquatic values and size.
- It is the responsibility of the site supervisor to ensure the required erosion and sediment control measures are installed prior to dewatering works commencing.

5.2.2 Water Quality during Dewatering

- Water quality testing will be done twice daily throughout the dewatering process, to monitor the water quality for things such as: declines in oxygen saturation levels that may have a detrimental impact on the aquatic occupants of the waterbody.
- Acid sulphate soils may be exposed during the dewatering process and could have a significant impact on the water quality of the waterbody.
- If the water does not meet the required standard to be released, dewatering works should be suspended until the water has been treated and meet the standard for release.

Acid Sulphate soils should be managed according to the State Planning Policy 2/02, Planning and Managing Development Involving Acid Sulphate Soils, State Planning Policy 2/02 Guideline, Acid Sulphate Soils and Queensland Acid Sulphate Soil Technical Manual, Soil Management Guidelines.

5.2.3 Water Removal

Site Supervisor Responsibilities	✓
To remove the last of the water out of the dam a few sumps will be dug out within the waterbody and the pumps (with fish shields) will be placed into these sumps. This will reduce the risk of fish being left in isolated ponds that are hard to reach and it will also make it easier to relocate the last few fish when all the water is almost drained.	
The water level will then be reduced by increments of 25%, this will allow as many fish as possible to be removed. If the water level drops too fast there will not be enough water or oxygen to support all the fauna within the waterbody.	

5.2.4 Aquatic Fauna Management Measures

Environmental Contractor Responsibilities	✓
All fish are to be removed, stored and released as quickly as possible. Animals will be transported within large, aerated tubs. Storage containers are to be filled with water from the waterbody that the fish were captured out of and are to be sized appropriately to allow for fish to swim comfortably in an upright position. Containers are also to be soft with rounded edges and have a lid to provide a darkened environment for captured fauna. Overcrowding is to be avoided, with approximately 0.2kg of fish per liter of water is considered appropriate. Water conditions within the containers are to be monitored continuously and the water should be changed hourly to ensure appropriate levels of oxygen are maintained.	
Fish are to be released carefully, with the container placed in the water to allow fish to swim away. All fish are to be handled using wet hands or a wet towel and Shimano enviro nets will be used which minimises the risk of removing any of the fish's protective mucus coating and reduces the possibility of split fins or any damage to their eyes. See for potential release sites of aquatic fauna.	
Only native species were relocated, any pest or exotic species captured will be humanely euthanized. Where prohibited or restricted invasive animals or noxious fish listed under the Biosecurity Act 2014 are captured, these will be euthanised. Methods used will be in accordance with relevant authority guidelines and the ANZCCART's Euthanasia of Animals Used for Scientific Purposes (2001).	
Exotic or pest plant species will be disposed of appropriately to avoid the spread of weeds into waterways.	
To further reduce the risk of fatalities in the final dewatering stage due to low levels of dissolved oxygen, there will be several suitably qualified staff on site to ensure that the fish are relocated as fast as practical.	
Tadpoles will be collected with soft handheld dip-nets. Any handling of amphibians will follow the DES Interim Hygiene Protocol for Handling Amphibians.	



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FAUNA MANAGEMENT PLAN - WRITTEN INFORMATION

(PAGE 4 OF 5)

CLIENT:
 Shadforth Civil Contractors

PROJECT CODE:
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 _WHMP_4

ISSUE	DESCRIPTION	DATE
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FAUNA MANAGEMENT MEASURES - CLEARING WORKS
787 RIPLEY ROAD SOUTH, RIPLEY, QUEENSLAND

5.2.1 Earthworks and Construction Phase

Objective: To reduce project impact on local fauna
 Responsibility: Construction crew
 Timing: Clearing works

Construction Phase Crew Responsibilities	
The Contractor shall ensure that, to the extent possible, project infrastructure and auxiliary works (laydown areas, stockpile sites, site office) are constructed in a manner that does not create additional hazards for wildlife.	
A FSC is present on site for all clearing works, and has informed crew of marked trees prior to clearing.	
Clearing is undertaken sequentially in 2 stages (1 st stage clear non-habitat trees, 2 nd stage, at least 24 hours later, clear habitat trees) in the clearing direction advised.	
Clearing of koala habitat trees follows the Koala Management Section requirements.	
To minimise impacts and conflicts between native animals, vehicular movement and access during construction, site access should be controlled via a single entry and exit point.	
Inspect open trenches, culverts and other structures prior to works being undertaken within an area to determine whether there are any trapped or injured native fauna species present and act as appropriate.	
Trenches, manholes, excavations for footings, etc. while open pose threats to native animal entrapment and should be backfilled as soon as possible. In some location's barriers may be required overnight to eliminate the accidental capture of animals moving through the site.	
Educate staff, including sub-contractors, in relation to the risk of fauna injury and deaths and how to manage animals which are displaced, including threatened species.	
All native wildlife is protected (including snakes) and shall not be intentionally harmed as a result of work or workers actions.	
All native animal fatalities must be reported immediately to the Environmental Coordinator.	
Where any site staff (contractors or subcontractors) witness or locates distressed, injured, or orphaned animals they should immediately contact the FSC and Environmental Coordinator. Works within the area of the animal must cease until further instruction is provided by one of the above authorities.	
Signed:	
Date:	

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6 MITIGATION MEASURES

To mitigate the impacts to fauna outlined in **Section 5**, the following measures are recommended to be implemented

6.1 Pre-clearance trapping

The following trapping methods will undertaken by a qualified ecologist or fauna spotter/catcher 1-3 days prior to approved clearing. Traps were set up on the 16th of October, 2024 with details on type and location displayed in **Figure 2** and **Table 2**.

6.1.1 General Trapping Guidelines

In general, the following points apply to the use of traps:

- Use the trapping method with the least impact,
- Select the type of trap which is appropriate to the species being targeted.
- Check traps prior to use to ensure that their clean and in good working order
- Limit the number of traps set per field worker to what can be cleared within two hours.
- Use a bait appropriate to the diet of the target species. The bait should not only lure the animal to the trap, but also replace the food and moisture it would have consumed had it not been trapped. This is particularly important for small mammals which have high metabolic rate.
- Place traps in a location which reduces the amount of exposure trapped animals get from the elements and potential predators (for example, place traps under shrubs or besides logs and ensure traps are covered with some branches or leaf litter).
- Avoid placing traps in areas of high ant activity.
- Ensure all traps are located, checked and removed. If individual traps are numbered and set in order it makes it easier to ensure all traps are checked.
- For nocturnal species, begin clearing traps before light. During periods of extremely cold weather, clear and remove traps by 0200 hours each day.
- For diurnal species, have an inspection schedule which minimises the impact on any trapped animals and locate the traps to minimise the possibilities of heat or cold stress.
- Release animals as soon as possible.
- Cease trapping immediately if there have been a few mortalities and change the survey methodology.
- All personnel checking traps need to be competent in handling a range of dangerous and venomous fauna species.

6.1.2 Elliot Traps

Various sized steel rectangles with a spring-loaded door that is triggered to close when weight is placed on a trigger plate inside the trap. These traps target small to medium mammals, but can also trap amphibians, reptiles and small birds.

Terrestrial Elliot traps are placed at equal distances apart along transect lines within the proposed trapping site. The size of the Elliot traps used will depend on the species that are being targeted in this survey. To improve trapping success and provide some cover and protection for captured animals place traps under shrubs, dense groundcover or against tree roots or logs. Number each of the traps and tick them off a checklist when checking them to ensure no traps are missed. Bait within the trap will depend on the species being targeted and will be removed and replaced daily.

Elliot traps pose a high risk of heat stress and dehydration, to better manage these traps need to be emptied within three hours after sunrise. Traps are to be closed when checked and only re-opened just before dusk.

Arboreal Elliot traps are secured to a bracket that is attached to the tree trunk of a food tree or habitat tree. These traps target small to medium arboreal mammals but can also capture amphibians and arboreal reptiles. The same procedure as the terrestrial Elliot traps are followed with the arboreal Elliot traps.

6.1.3 Cage Traps



Cage traps come in wide variety of sizes (e.g., Cat, Possum, Dog, Quoll), constructed from mesh and shaped in a square or rectangular shape. The door closes when a weight is put on a trigger plate inside the trap or when a baited trigger is touched. They target medium to large mammals but also capture large reptiles. The camera monitoring technique has been proven to be more effective in detecting medium to large mammals and is the preferred method for this group of species.

Traps should be placed along the same transect as the Elliot traps but with a greater distance between the traps compared to the Elliot traps. Traps should be placed in thick groundcover or next to fallen logs and covered in dense leaves/branches. This will provide some protection of the elements and predators; traps should be checked within 3 hours after sunrise. Traps should be closed during the day to reduce the risk of stress to captured fauna. All bait should be removed daily and disposed of off the survey site.



FIGURE 2- LOAD REDUCTION TRAP LOCATIONS

TABLE 2 - LOAD REDUCTION TRAP TYPE AND LOCATION

#	TRAP TYPE	Latitude	Longitude
			
1	Elliot trap	-27.691525	152.7976927
2	Elliot trap	-27.6915125	152.7976519
			
3	Medium cage trap	-27.691499	152.7976743
4	Elliot trap	-27.69163	152.7977228
5	Elliot trap	-27.6916671	152.7977204
6	Elliot trap	-27.6916797	152.7977034
7	Medium cage trap	-27.6917332	152.7977169
8	Small cage trap	-27.6918032	152.7978612
9	Elliot trap	-27.6918529	152.797881
10	Elliot trap	-27.6918713	152.7978728
11	Elliot trap	-27.6919066	152.7978664
12	Elliot trap	-27.6919248	152.7979368
13	Small cage trap	-27.6919413	152.7979344
14	Elliot trap	-27.6921271	152.7980381

#	TRAP TYPE	Latitude	Longitude
15	Elliot trap	-27.6922323	152.7980629
16	Small cage trap	-27.69260293	152.7981567
17	Elliot trap	-27.6924689	152.798201



18	Medium cage trap	-27.6926632	152.798321
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19	Arboreal elliot trap	-27.6927492	152.7982865
20	Elliot trap	-27.6927964	152.7983587
21	Elliot trap	-27.6929149	152.7984253
22	Arboreal elliot trap	-27.6930564	152.7984212
23	Elliot trap	-27.6930855	152.7984326
24	Medium cage trap	-27.6931552	152.7984357

6.2 Nest Box Management Measures

The aim of nest boxes is to compensate for the loss of habitat features by the development of the site. The types of nest boxes to be installed will be influenced by desktop research and survey results.

This site is located within the Ipswich City Council, where there are no outlined details regarding nest box installation, so the following standard conditions set out in the QUEENSLAND CODE OF PRACTICE FOR THE WELFARE OF WILD ANIMALS AFFECTED BY LAND-CLEARING AND OTHER HABITAT IMPACTS AND WILDLIFE SPOTTER/CATCHERS are recommended to be followed:

- When a hollow is removed whether occupied or not, a nest box should be installed at a 1:1 ratio and where hollows exist within arboreal termite mounds, nest boxes should be installed at a 1:1 ratio

6.2.1 Nest box calculations

During the survey a total of twenty-seven hollows were recorded, none were identified as occupied, therefore the following calculations are made (**TABLE 2**). If during clearing works more hollows are discovered, new calculations should be made.

TABLE 3 - NEST BOX CALCULATIONS

	Count	Calculations	Required nestboxes
Unoccupied hollows	27	27/1	27
Hollows within arboreal termite mounds	0	0/1	0
		Total	27

AWEC recommends the installation of **twenty-seven nest boxes** to replace the loss of hollows at this site. The sizes and types of nest boxes installed should vary between small to large, appropriate for a variety of species. The amount of nest boxes to be used is subject to change according to clearing works and post-clearance survey.

6.3 Wildlife Friendly Development Measures

6.3.1 Wildlife friendly lighting

Light pollution from human developments can have adverse effects on many species' reproduction and foraging behaviours, ultimately affecting biodiversity and ecosystem resilience. Therefore, it is important to implement provisions at development level to reduce the likelihood of these affects. These impacts are not limited to the significant species listed in Error! Reference source not found., but extends to other Least Concern species in the local area, across all taxa (i.e. frogs, sugar gliders, wallabies, migratory birds and reptiles).

It is recommended that the National Light Pollution Guidelines for Wildlife (CoA 2020) is used to guide the selection and planning of all development lights. This document includes a section on best practise for lighting design which outlines 6 simple principles:

- Start with natural darkness and only add light for specific purposes.
- Use latest adaptive light control technology (i.e. remotely managing lighting, timers, motion sensors, colour control etc.).
- Light only intended area – keep lights close to the ground, directed and shielded.
- Use appropriate lighting – number and intensity should be appropriate for activity.
- Use non-reflective, dark coloured surfaces.
- Use lights with reduced or filtered out blue, violet and ultraviolet wavelengths.

6.3.2 Koala Exclusion Fencing

To avoid negative interactions between homeowners and local wildlife, fencing can be constructed. This aims to exclude certain animals from entering residential backyards where they may be at risk from humans or pets or may damage property. This fencing must consist of koala proof materials, must not contain a gap between the ground and the fence, and be a minimum of 1.5m high. They must be friendly to all fauna and direct fauna toward the southern and western extents of site where there are areas of retained vegetation.

These fences will be installed along the site boundaries against Centenary Highway (Northern Extent) and against Ripley Road (Eastern Extent). Regular maintenance of fencing will be carried out during the construction phases to ensure no sections remain breached during a damage event (vehicle/machinery crash, harsh weather event, etc).

6.3.3 Wildlife Movement Measures

Naturally, animals move between environments - foraging for resources, searching for mates, or dispersing to new territories. This instinctual behaviour doesn't stop when human developments arise, and new roads can pose a major threat to wildlife who are trying to move across their habitats. That's why it is integral to plan for fauna movement in development design.

It is recommended that green infrastructure guided by Chapter 6 of the Department of Transport and Main Roads *Fauna Sensitive Road Design* Volume 2 (Queensland Government 2010) is included in this development.

6.3.4 Wildlife Safe Signage

Another method to reduce wildlife and vehicular collisions is signage to alert drivers to the presence of fauna. There are many types of wildlife signs that can be used to educate the public and increase awareness of local species, due to the large number of kangaroos observed on site and the koala habitat it is recommended specific signage is included for both of these species.

7 CONCLUSION

AWEC were commissioned by Shadforth Civil Contractors to compile a Wildlife and Habitat Mitigation Plan for the development on 787 Ripley Road South, Ripley, QLD.

This document outlines the fauna management measures to be adhered to for the duration of the project which aim to minimise impacts to native wildlife.

8 RECOMMENDATIONS

To manage the risk to native fauna the following measures are recommended:

- Suitably qualified FSC to supervise all clearing works.
- Any woody debris or felled hollows to be relocated into retained vegetation.
- Native street planting is recommended to reduce the amount of lost foraging habitat.
- Thermal camera to inspect the site the morning prior to works commencing –
 - i. Focusing on detecting any koalas within or adjacent to the site
- Nest boxes are installed to replace lost habitat features.
- Wildlife friendly lighting, fencing, movement measures and signage be implemented within development plans.

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674-SCC2409-D

FAUNA PRE-CLEARANCE REPORT

787 Ripley Road, South Ripley, QLD 4306



Prepared for:
**Shadforth Civil
Contractors**

Delivered:
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Authority

This report has been prepared for use in managing staff and subcontractors relevant to the management and protection of the environment during the project's work. Its application is authorised as part of the client undertaking works. The issue and revision of this report are made under the authority of the Project Manager.

Reports and/or Plans

Assessment reports and drawings provided by the client have been used to develop this report and support the document.

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1 Introduction

1.1 Background

Australia Wide Environmental Consultants (AWEC) were commissioned by Shadforth Civil Contractors ('the Client') to conduct a pre-clearance field survey and prepare a pre-clearance report associated with vegetation clearing located at 787 Ripley Road, South Ripley, QLD 4306, hereafter referred to as the Project.

It is understood the scope of work includes vegetation clearing undertaken within Lot 2 on SP326583 referred to as the 'survey area' located within the Project.

This report provides a summary of the pre-clearance results based on a field survey conducted on the 17th of September 2024, by a suitably qualified and experienced person (fauna) from AWEC, as well as management actions for implementation before and during vegetation clearing activities.

1.2 Scope of Fauna Management

The field survey was conducted on foot to achieve the following objectives:

1. Identify and mark GPS coordinates of any potential habitat and breeding sites for terrestrial, arboreal, and aquatic fauna likely to be impacted by clearing and construction works (e.g., tree hollows, burrows, nests, arboreal termite nests, mulch and rockpiles, and waterbodies).
2. Provide a recommended strategy to aid in the avoidance and/or mitigation of impact by vegetation clearing to conservation significant fauna species and other native fauna.

AWEC implemented a process methodology for the management of fauna and habitat in accordance with the following legislation, guidelines, and project-specific documents (as outlined in **Table 1.2.1**).

Table 1.2.1 Legislations, Guidelines, and Project-Specific Documents

Document Title	Purpose of Legislation
Animal Care and Protection Act 2001	The Queensland Animal Care and Protection Act 2001 (the Act) promotes the responsible care and use of animals.
Environmental Offsets Act (2014)	The main purpose of this Act is to counterbalance the significant residual impacts of particular activities on prescribed environmental matters through the use of environmental offsets.
Environmental Protection Act (1994)	The Environmental Protection Act 1994 (EP Act) lists obligations and duties to prevent environmental harm, nuisances, and contamination.
Environment Protection and Biodiversity Conservation Act (1999)	The EPBC Act 1999 focuses on Australian Government interests in the protection of matters of national environmental significance, with the states and territories having responsibility for matters of state and local significance.
Nature Conservation Act 1992 (NC Act)	The Nature Conservation Act 1992 (the Act) provides the legislative basis for the conservation of nature through the dedication, declaration and management of protected areas and the protection of native wildlife and its habitat.
Nature Conservation (Animals) Regulation (2020)	The Nature Conservation (Animals) Regulation 2020 (Animals Regulation) introduces a new wildlife licensing framework but incorporates and streamlines existing provisions from the regulations that it replaces.

Table 1.2.1 Legislations, Guidelines, and Project-Specific Documents

Document Title	Purpose of Legislation
Nature Conservation (Koala) Conservation Plan (2017)	The main purposes of this plan are— (a) to promote the continued existence of viable koala populations in the wild, and (b) to prevent the decline of koala habitats.
Nature Conservation (Plants) Regulation 2020	The regulatory framework captures clearing and harvesting activities that pose a significant risk to plant biodiversity.
Vegetation Management Act 1999 (VMA)	The Vegetation Management Act 1999 regulates the clearing of vegetation in Queensland in a way that conserves remnant vegetation, ensures clearing does not cause land degradation, prevents loss of biodiversity, maintains ecological processes, reduces greenhouse gas emissions, and allows for sustainable land use.
Water Act 2000 (Qld)	The Water Act 2000 (Qld) provides a framework for the planning, allocation and use of surface water and groundwater in Queensland.
Project documents	Documents and requirements supplied by client to abide by.

2 Permits and Reporting

AWEC currently holds and operates under a DES Rehabilitation Permit for Spotter Catcher Activity, Permit No. WA0055123 and a Damage Mitigation Permit (removal and relocation of wildlife), Permit no. WA0054928, licensed in the State of Queensland.

It is understood that the Project currently operates under the Species Management Program (SMP) for tampering within the animal breeding place(s) where there is a low risk of impacts.

All information related to wildlife that will be collected and submitted as part of the Animal Breeding Places Register returns to the Department of Environment and Science (DES) are detailed in **Section 5.5** of the Fauna and Vegetation Management Measures in **Table 5.1**.

A post-clearing report including the provision of an animal breeding place register is to be submitted following the completion of vegetation-clearing activities.

3 Desktop Assessment

Prior to commencing the pre-clearing survey, all previous Project surveys and management plans related to the survey area were reviewed, as well as an extensive desktop assessment of the survey area (refer to **Figure 1**).

The initial assessment for the vegetation clearing activities consisted of a desktop review of publicly available ecological data sources and information on the survey area. The desktop review was followed by an on-ground field survey in conjunction with the pre-clearance field survey to describe the ecological values present and to aid the evaluation of the potential impacts of the Project on identified habitat values.

The following data sources were used to inform the desktop assessment for the survey area.

3.1 Regional Ecosystem Map

The Queensland DNRME Vegetation Management Regional Ecosystem (RE) Map was viewed to determine the extent, type, and status of REs mapped within the survey area.

The existing vegetation contains the following:

- RE 12.9-10.16 Of concern (Category C)
- RE 12.9-10.2 Least concern (Category C)
- RE 12.9-10.7 Of concern (Category C)
- Non-remnant (Category X)

3.2 Matters Of State Environmental Significance

The following prescribed environmental matters are identified as occurring within the survey area of the Project:

- MSES-regulated vegetation (defined watercourse)

Schedule 2 of the Environmental Offsets Regulation 2014 outlines a list of prescribed environmental matters that are considered matters of state environmental significance (MSES).

3.3 South-East Queensland Koala Mapping

The Department of Environment and Science (DES) released new regulatory koala habitat maps that support the implementation of the South-East Queensland Koala Conservation Strategy 2020–2025 and amended koala conservation protections within the planning framework. It identifies the best quality koala habitat based on modelling of biophysical measures, suitable vegetation for food and shelter, and two decades of records of koala sightings.’

The survey area is mapped as containing the following:

- Koala habitat area (core).

3.4 Protected Plants Flora Survey Trigger Map

The Department of Environment and Science (DES) Protected Plants Flora Survey Trigger Map spatial layer was viewed to determine if the vegetation within the survey area is in proximity to a record of a conservation significant flora species.

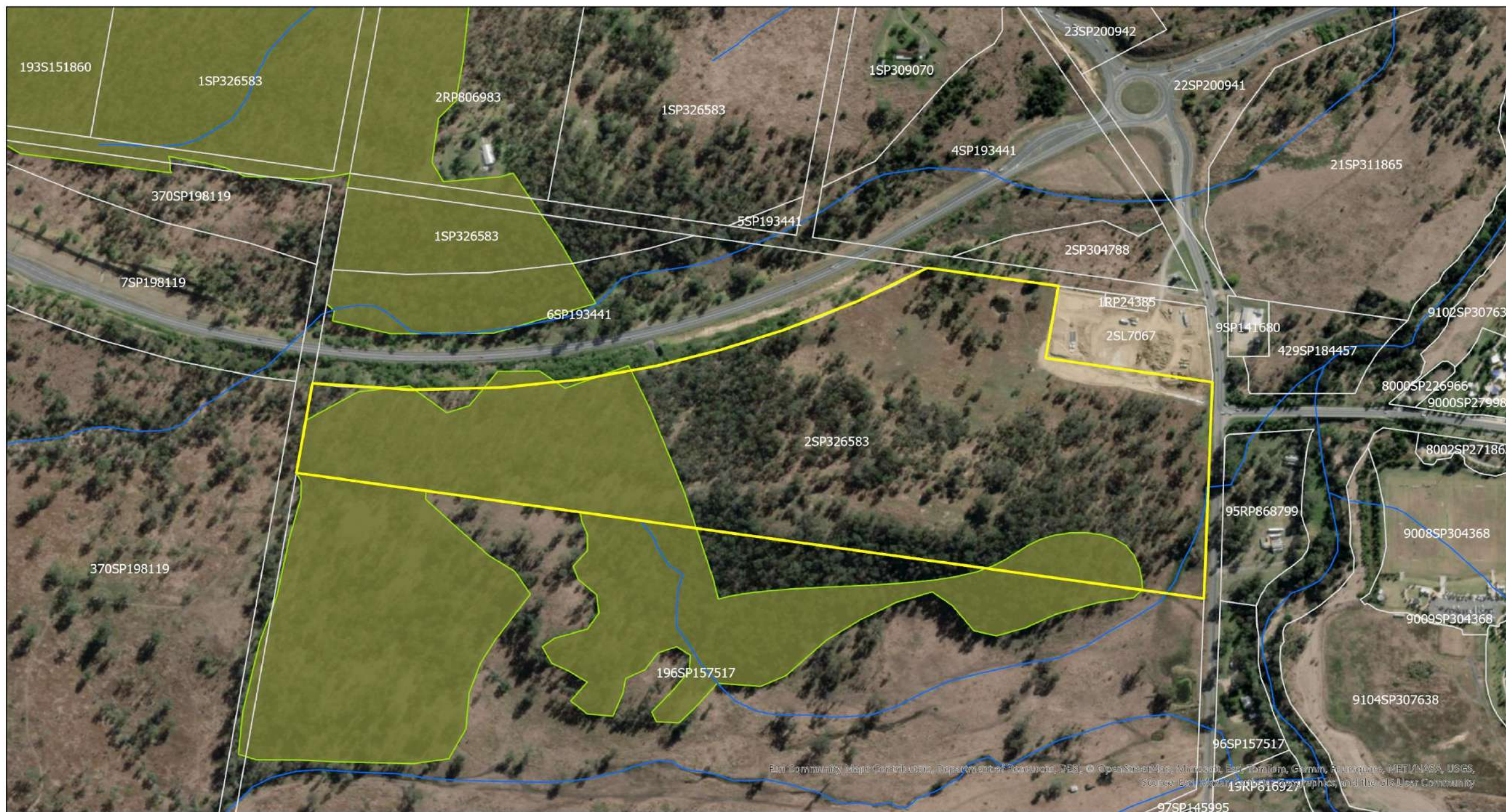
- The survey area is mapped as a ‘high-risk area’ under the DES Protected Plants for a Survey Trigger mapping. In accordance with Section 5.1 of the Flora Survey Guidelines – Protected Plants (V2.01) (DES 2020), this triggers the requirement for a protected plant flora survey of the clearing impact area.

3.5 Wildlife Online Database

The Queensland Government Wildlife Online database was used to retrieve historical records of flora and fauna species listed under the NC Act previously observed within a 2 km radius of the central coordinates of the survey area.

- The results of the Wildlife Online Extract listed one (1) fauna species within a 2 km radius of the Project and are displayed in **Table 3.5.1**.

Table 3.5.1 Wildlife Online Results	
State-Listed Threatened Species	Conservation Status
<i>Fauna Species</i>	
Koala (<i>Phascolarctos cinereus</i>)	Endangered



	Site Context	N	Legend
	787 Ripley Road, South Ripley, QLD		Scale: 1:5,121
Spatial Reference Name: GCS WGS 1984			

Figure 1. Survey Area Displaying Limits of Clearing (Indicative Only).

4 Field Survey

4.1 Survey Methodology

The field survey was carried out by one (1) Suitably Qualified and Experienced Person (fauna) on the 17th of September 2024. The following survey methodologies were employed to identify habitat features requiring further management action (**Table 4.1.1**).

Table 4.1.1 Survey Methodologies	
Survey Type	Survey Methodology
Track, scat and sign searches	In the form of footprints and tracks, scats, feeding marks on trees, hairs, feathers, bones, slough, nests, feeding stations and carcasses and incidental surveys
Destructive searches	For indications of occupancy of rocky outcrops, hollow logs, peeling bark, scattered timber, burrows, soil cracks, termite mounds, ground nests, shrubs, leaf litter and grasses
Conduct hand searches	For any terrestrial fauna including high-risk species listed as special least concern, migratory or colonial species and fauna species of conservation significance likely to be impacted by clearing and construction works
Visual searches	For indications of occupancy of nests, hollows, exfoliating bark, fissures, dreys and arboreal termitaria
Aquatic assessment (if applicable)	Of occupancy indicators including amphibian calls or breeding signs, slide marks, burrows or tracks on banks, nesting sites for fish, and breaks in surface tension or bubbles
Opportunistic surveys (if applicable)	To assess the presence of conservation significant flora species likely to occur within areas mapped under the protected plants flora trigger overlay

All features were located using a GPS Kit and the location coordinates were recorded and marked on-site. A description of the above features was recorded and entered into an electronic database. Representative photographs were taken and stored for reference purposes.

4.2 Survey Area

The survey area encompasses a region characterised by dry sclerophyll vegetation, primarily dominated by acacia species. The area begins at Ripley Road and extends behind the service station. The site is covered with knee-high grass, and there is noticeable evidence of farm animals wandering in from adjacent properties.

Large trees throughout the area feature numerous hollows, though bird activity is sparse, the occasional bird can still be observed. Evidence of macropods, such as kangaroos or wallabies, is visible, with distinct paths worn through the tall grass.

Additionally, the site is dotted with sizable termite mounds, some of which are actively occupied by termites while others are not. A dam is also present within the surveyed area.

General vegetation observed within the survey area is displayed in **Figures 2 - 5**.



Figure 2. General survey area of grassland and trees



Figure 3. General survey area of grassland and trees



Figure 4. Waterbody (dam)



Figure 5. Drainage line

4.3 Survey Results

The survey area provides habitat potential and opportunistic habitat for fauna species such as koalas, wallabies, possums, birds, and reptiles and acts as a temporary refuge for fauna moving within the local area.

The fauna biodiversity observed within the survey area during the field survey is listed below in **Table 4.3.1**.

Table 4.3.1 Fauna Biodiversity		
Common Name	Scientific Name	NCA Status
Torresian Crow	<i>Corvus orru</i>	C
Noisy Miner	<i>Manorina melanocephala</i>	C
Australian Magpie	<i>Gymnorhina tibicen</i>	C
Rainbow Lorikeet	<i>Trichoglossus moluccanus</i>	C
Sulphur-Crested Cockatoo	<i>sulphur-crested cockatoo</i>	C
Laughing Kookaburra	<i>Dacelo novaeguineae</i>	C
Indian Miner	<i>Acridotheres tristis</i>	C
Masked Lapwing	<i>Vanellus miles</i>	C

Codes: EX- extinct, PE- extinct in the wild, CR- critically endangered, E- endangered wildlife, V- vulnerable wildlife, NT- near threatened wildlife, SL- special least concern, C- least concern wildlife and I- international wildlife.

No (0) signs of conservation significant fauna species, or breeding places were observed within the survey area. A total of twenty-eight (28) habitat features and fauna signs were recorded during the survey and displayed in **Table 4.3.2**.

Among the habitat features listed, water bodies are included within the survey area. Where dewatering of a waterbody is required, refer to **Section 5.12** for guidance on Dewatering Management Measures.

Photographs of habitat features and fauna signs within the survey area are displayed in **Figures 6 - 9**, followed by the distribution of habitat features, and fauna signs identified across the survey area displayed in **Figure 10**.

Table 4.3.2 Habitat Features & Fauna Signs Records

Habitat Features	Count
Bird Nest	0
Possum Drey	0
Dam/waterbody (Aquatic Habitat)	1
Termite Mound	5
Habitat Tree (DBH > 80 cm)	3
Dense Veg	1
Fissured Bark	1
Hollow-Bearing	11
Stag Trees	1
Rocky Outcrops	0
Woody Debris	0
Total:	23 Habitat Features
Fauna Signs	Count
Diggings	1
Scat	1
Tracks	2
Scratch Marks	1
Native Beehive	0
Total:	5 Fauna Signs



Figure 6. Large stag tree

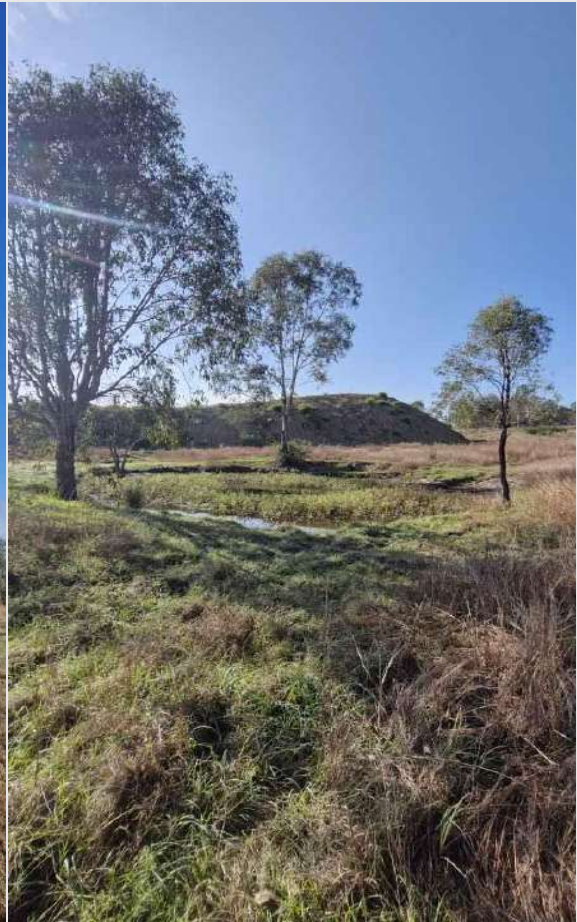


Figure 7. Waterbody (dam)



Figure 8. Multiple hollows within trees



Figure 9. Termite Mound

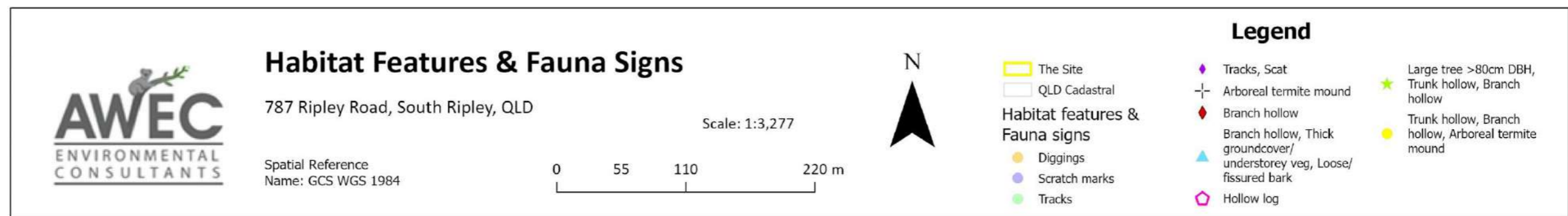


Figure 10. GPS Location of Habitat Features and Fauna Signs Recorded During the Field Survey.

5 Fauna Management Strategies

Threatening processes as defined under the EPBC Act 1999 are those processes that threaten or may threaten the survival, abundance or evolutionary development of a native species or ecological community.

In accordance with the NC Act 1992 and the Animal Care and Protection Act 2001, threatening processes are also those that have a negative impact on the welfare of individual animals. For fauna within the proposed development area, vegetation clearing has the potential to result in injury or death.

The pre-construction phase of a Project is generally considered a relatively short period of intensive activity, which can be associated with several threatening processes. Potential impacts and management strategies to avoid and minimise impacts to native fauna outlined in the Fauna & Vegetation Management Measures of **Table 5.1** below focus on this phase of the Project, including vegetation clearing and earthworks activities.

The Fauna & Vegetation Management Measures table details management measures in further detail for the following:

- Pre-clearing
- Clearing and Grubbing
- Fauna Capture and Release
- Injuries & Euthanasia
- Reporting
- Koala Management
- Mulching works
- Native Beehive Relocation
- Recommended Management Actions
- Earthworks and Construction Phase
- Dewatering Management Measures
- Nest Box Management Measures

The purpose of the Fauna & Vegetation Management Measures is to advise the on-site crew of the requirements they must adhere to in order to minimise impacts to fauna during this Project.

Table 5.1 FAUNA & VEGETATION MANAGEMENT MEASURES

787 Ripley Road, South Ripley, QLD 4306

5.1 Pre-clearing

Objective: Mitigate the risk to native fauna
 Responsibility: Fauna Spotter Catcher (FSC)
 Timing: Pre-construction

Prior to Work Commencing	✓
Ground inspection morning prior to clearing	
Mark habitat features and trees	
Inform clearing crew at pre-start meeting of marked trees, clearing process and approved requirements of FMP	
Any fauna sighted prior to clearing should be relocated	
Where koalas may be present, specific inspection should be conducted the day before, by foot and/or drone	

5.2 Clearing and Grubbing

Objective: Reduce risk to fauna during clearing
 Responsibility: FSC & construction/clearing crew
 Timing: Earthworks

During Disturbance Works	✓
A Department of Environment and Science licensed and suitably qualified FSC must be present for all clearing and grubbing to supervise and respond to fauna encounters	
FSC must hold an appropriate rehabilitation permit	
FSC must conduct a visual inspection of the clearing area daily	
Clearing sequentially towards vegetation in two stages	
First clearing stage: non-habitat trees, cleared and stockpiled for mulching.	
Second clearing stage: habitat trees, min. 24 hours later, preferably afternoon, assessed for the best method (camera, climber, EWP, drone).	
Habitat trees are to be inspected for animal inhabitants	
Occupied trees must be blocked off and fauna relocated	
Trees with unconfirmed occupancy must be soft felled to reduce fauna injury and habitat damage	
Injured animals should be either humanely euthanised or taken to a local wildlife hospital or carer (See Section 5.4).	
Works must be conducted in accordance with management actions and recommendations listed, the relevant Species Management Programs, the NC Act 1992, EPBC Act 1999, and the Animal Care and Protection Act 2001.	

If, during the pre-clearing activities, a real and proximate risk to animal welfare is discovered that was not previously identified during the initial habitat assessment, an animal welfare direction will be provided to include additional fauna management methodology.

Where the risk is identified during the disturbance/clearing phase of operations, an animal welfare direction will be supplied in written format to the Administrator and will define the timing of, and actions or measures required to protect the welfare of animals likely to be affected by such operational works, activities, or structures.

Clearing must occur towards vegetated areas to allow for wildlife to self-relocate into surrounding vegetation and prevent isolating fauna.

5.3 Fauna Capture and Release

Objective: Mitigate the risk to native fauna
 Responsibility: FSC
 Timing: All Phases

Where possible, sighted fauna must be captured, responsibly stored, and relocated. However, koalas cannot be captured, handled, stored, or removed from the site and must be managed in accordance with legislation (Section 5.6).

Storing Fauna

- Secure in a:
 - Calico bag, knotted and zip tied; or,
 - Snake bag, knotted and zip tied; or
 - Pet carrier.

Place in a quiet, dark area, at an appropriate temperature for the species until able to be safely released.

If an animal is orphaned or injured, store it in a secure manner to prevent unnecessary stress or further injury.

Releasing and Relocating

Relocation and release must consider the following:

- Suitable habitat with an adequate food and water supply.
- Appropriate weather, season, and time of day for species.
- Appropriate social group. Some animals fare better if released into social groups.
- Within 1 km of the site, as per DES guidelines, in a protected location.
- If animals can be re-released on the clearing site once clearing is complete the following criteria must be followed:
 - Sufficient habitat retained to support animal's niche, considering factors such as vulnerability to predation; availability of nesting sites, hollows or microhabitats and the availability of water and sufficient food sources.
 - Sufficient connectivity between habitats allowing for normal ecological processes such as immigration, emigration, recruitment, and dispersal.
- Habitat blocks and corridors are of sufficient size to maintain ecological integrity and effectiveness, considering likely edge effects.
- Long-term risk factors assessed and mitigated (E.g., risk from domestic animals, vehicles, swimming pools).

5.4 Injuries & Euthanasia

Sometimes euthanasia is required to end the suffering of an injured animal. If this is required, it should be done promptly and humanely.

If injured animals have a reasonable chance of recovery, they should be taken to the closest vet for treatment. Any orphaned young or fauna with minor injuries (e.g., concussion) should be taken to the closest carer. Some animals for example koalas will require specialist care and the closest suitable care facility should be contacted.

Local wildlife care groups are listed below and are to be contacted in the event that injured and/or orphaned wildlife species are observed.

Recommended Wildlife Surgery:

- Ripley Veterinary Hospital - (07) 3816 4717
- Australia Zoo Wildlife Hospital, Beerwah - (07) 5436 2097
- RSPCA Wildlife Hospital - 1300 ANIMAL
- Wildcare Australia Inc - (07) 5527 2444

Table 5.1 FAUNA & VEGETATION MANAGEMENT MEASURES

787 Ripley Road, South Ripley, QLD 4306

5.5 Reporting

Objective: Adhere to DES requirements
 Responsibility: FSC
 Timing: All Phases

All fauna injuries or deaths will be reported to the Construction Contractor Project Manager.

After the works, a report on fauna injury, death, capture, and relocations and offsets will be provided to the client.

Record these details for each captured animal ✓
Species
Sex (M, F or Unknown)
Approximate Age or Age Class (neonate, juvenile, sub-adult, adult)
Time and date of capture
Method of capture
Exact point of capture (GPS coordinates)
State of health
Incidents associated with capture likely to affect health
Veterinary intervention or treatments
Time held in captivity
Disposal method (euthanasia, translocation, re-release)
Date and time of disposal
Details of disposal (GPS points of release)
For released animals, location relative to the point of capture

5.6 Koala Management

Objective: To protect local koala populations
 Responsibility: Koala Spotter, FSC & Clearing Crew
 Timing: All Phases

If a Koala is observed within the site, a DES approved Koala spotter must be on site to monitor the animal until it has self-relocated off-site. A DES-approved Koala spotter is a person who holds a relevant tertiary qualification, and/or who is experienced (Endorsed FSC) in the identification and location of koalas in their natural habitat and has authorisation from DES.

DES-approved Koala FSC must ✓
Be present at the site of felling
Identify Koala occupied trees/overlapping trees
Advise crew of the precise locations of these trees

The *Nature Conservation and Other Legislation (Koala protection) Amendment Regulation 2020* outlines that the following measures must be undertaken to minimise, reduce or mitigate impacts to Koala’s in potential koala habitat areas:

- Sequential clearing to assist fauna in relocating to nearby habitats on their own accord.
- No tree in which a Koala is present and no tree with a crown overlapping a tree with a koala present will be disturbed.
- 50m buffer created around such tree - where works are seized until the Koala has moved off on its own accord.
- Where practical, a vegetation corridor is to be left, to allow koalas to self-relocate to a suitable area not in a clearing zone.
- In areas containing a dominance of koala food trees and positively identified Koala sightings and/or identified scat or scratch marks, a koala spotter is to be present during clearing activities.
- If a Koala is not injured but refuses to move from the clearance area on its own accord after two days, the Koala spotter will liaise with DES and negotiate appropriate methods for removal and relocation.

5.7 Mulching Works

Objective: To reduce project impact on local fauna
 Responsibility: FSC & Clearing Crew
 Timing: Clearing works

Stockpiled vegetation, topsoil and other materials can quickly become temporary habitat for animals displaced during the actual clearing and earthworks.

Timber should not remain on-site for longer than 48 hours prior to shearing or mulching. Where this is not practical, a FSC is to be present for the shearing/mulching works. If fauna is identified, the FSC will relocate the fauna to an appropriate location within the remnant vegetation.

During mulching works ✓
Identified hollows should be salvaged from trees and preserved
Stockpiled vegetation should be inspected by FSC for fauna prior to removal.

5.8 Native Beehive Relocation

Objective: To reduce project impact on local fauna
 Responsibility: FSC & Clearing Crew
 Timing: Clearing works

All native beehives of the genera *Tetragonula (syn Trigona)* and/or *Austroplebelia* are to be recovered during vegetation clearing works for relocation into the retained vegetation and/or recovered and “boxed up” (if damaged).

If a native beehive is located on-site, its entrance is to be blocked off before sunrise. The extent of the beehive within the hollow is to be established using a fibre optic camera. The beehive is then to be cut out and both ends of the hive sealed off using treated wood. The beehive is then to be relocated to a suitable location and left overnight. The next morning at sunrise the entrance is to be opened.



Example Of Relocated Native Beehive

Table 5.1 FAUNA & VEGETATION MANAGEMENT MEASURES

787 Ripley Road, South Ripley, QLD 4306

5.9 Recommended Management Actions

Objective: To reduce project impact on local fauna
 Responsibility: Koala Spotter, FSC & Clearing Crew
 Timing: Clearing works

Management strategies of habitat features to be adopted during vegetation-clearing activities are summarised below.

Any hollow-bearing tree, stag, or other trees that may previously have contained wildlife, may be felled if:

- the fauna spotter/catcher has determined definitively that no wild animals are present in the tree at the time of felling; or
- the fauna spotter/catcher has removed all wild animals from the tree immediately prior to felling.

Habitat Feature	Recommended Management Strategy
Koala	Where a Koala is present within a clearing zone, the tree will be marked with distinctive flagging (and other advisory means as required) and machinery operators will be briefed on the location of the area. No clearing activities can occur within 20 m of the tree retaining a Koala until the animal has moved on of its own volition (where the strategy is to allow the Koala to move of its own accord, overnight). On the following day, the tree and retained area, are to be checked again before their removal. If necessary, the procedure is repeated until the Koala has moved. If the Koala is sick or injured and needs medical attention, DES will be contacted, and trapping by the FSC may be required to allow the Koala to receive medical attention. Actions will be guided by DES and the FSC.
Hollow-bearing limbs and Stag trees	Remove understorey vegetation and non-habitat trees before removing habitat trees. Segmental removal of the tree, with hollow-bearing limbs, plugged and lowered to the ground for inspection by the fauna spotter/catcher; use of an excavator with vertical grab to sensitively lower the main trunk in a controlled manner (after removal of lateral limbs); visually inspect any hollow limbs before mulching.
Non-juvenile koala habitat trees (NJKHT)	Clearing of koala habitat trees is carried out under the supervision of the fauna spotter catcher in a way that ensures appropriate habitat links are maintained within the area being cleared and the adjacent area and ensures koalas occupying the area that is being cleared have enough time to move out the area being cleared without human intervention; occupied and surrounding trees are not to be cleared, and if the area being cleared is more than 3 hectares: <ul style="list-style-type: none"> • The clearing must be carried out in stages; and • If the area being cleared is less than six (6) hectares, no more than 50% of the area being cleared can be cleared in any one stage; and • If the area being cleared is more than 6 hectares, no more than three (3) hectares or 3% of the area being cleared (whichever is the greater) can be cleared in any one stage. • Between each stage and the next, there is at least one 12-hour period (starting at 6 pm on a day and ending at 6 am on the following day) during which no trees are cleared on the Project.
Birds nest/possum dray	Remove understorey vegetation and non-habitat trees before removing habitat trees. Using a fixed harvesting head, sensitively lower the trunk in a controlled manner under the supervision of the FSC. Visually inspect any hollow limbs before mulching.
Arboreal termitaria	Inspect using observational techniques. If determined to be inactive following inspection using drone and/or camera pole, follow relevant felling methodology – i.e., if the tree is hollow-bearing, employ methodology for hollow-bearing trees described in this table.
Rocky outcrops	Undertake slow, destructive search under the supervision of the FSC.
Woody debris	Inspect using a torch. Undertake slow, destructive search under the supervision of FSC.
Dam (aquatic habitat)	Remove aquatic weeds where possible. Dewatering activities are to occur under the Fish Salvage Guidelines (DPI, 2004).

Table 5.1 FAUNA & VEGETATION MANAGEMENT MEASURES

787 Ripley Road, South Ripley, QLD 4306

5.10 Earthworks and Construction Phase

Objective: To reduce project impact on local fauna
 Responsibility: Construction Crew
 Timing: Clearing works

Construction Phase Crew Responsibilities	✓
The Contractor shall ensure that, to the extent possible, project infrastructure and auxiliary works (laydown areas, stockpile sites, site office) are constructed in a manner that does not create additional hazards for wildlife.	
A FSC is present on site for all clearing works and has informed the crew of marked trees prior to clearing.	
The clearing is undertaken sequentially in 2 stages (1 st stage is to clear non-habitat trees, 2 nd stage, at least 24 hours later, to clear habitat trees) in the clearing direction advised.	
Clearing of koala habitat trees follows the Koala Management Section requirements.	
To minimise impacts and conflicts between native animals, vehicular movement and access during construction, site access should be controlled via a single entry and exit point.	
Inspect open trenches, culverts and other structures prior to works being undertaken within an area to determine whether there are any trapped or injured native fauna species present and act as appropriate.	
Trenches, manholes, excavations for footings, etc. while open pose threats to native animal entrapment and should be backfilled as soon as possible. In some locations, barriers may be required overnight to eliminate the accidental capture of animals moving through the site.	
Educate staff, including sub-contractors, in relation to the risk of fauna injury and deaths and how to manage animals which are displaced, including threatened species.	
All native wildlife is protected (including snakes) and shall not be intentionally harmed as a result of work or workers' actions.	
All native animal fatalities must be reported immediately to the Environmental Coordinator.	
Where any site staff (contractors or subcontractors) witness or locate distressed, injured, or orphaned animals they should immediately contact the FSC and Environmental Coordinator. Works within the area of the animal must cease until further instruction is provided by one of the above authorities.	

5.11 Notification & Corrective Action

Objective: To reduce project impact on local fauna
 Responsibility: Contractor and Project Manager
 Timing: Clearing works

Contractor and Project Manager Responsibilities	✓
Endorsement of a low-risk Species Management Program for tampering with the breeding place of a least concern species.	
The client is required to notify the Administrator in the event that active breeding places (i.e., eggs/young) are identified within the clearing footprint, as well as identification of breeding places for any conservation significant fauna species, special least concern, migratory or colonial species as listed under the NCA 1992 or the EPBC Act. Initial notification of animal breeding places will be transmitted with the relevant data sets (photos and GPS) within the pre-clearance report (where identified) or 24 hours and directly prior to clearing during the pre-clearing checks. Where no breeding places have been tampered with a NIL Animal Breeding Place Register will be provided to the client.	
Vegetation clearing and disturbance procedures will be reviewed and improvements to the procedure will be made as required.	

Table 5.1 FAUNA & VEGETATION MANAGEMENT MEASURES

787 Ripley Road, South Ripley, QLD 4306

5.12 Dewatering Management Measures

Pre-dewatering Phase

1. At a minimum, work will be conducted under the following:
 - Rehabilitation Permit by appropriately qualified ecologists.
2. Where significant waterbodies contain a high density of aquatic fauna, load reduction trapping will be conducted. A two day long trapping program will start once the dam is 40% dewatered. With a focus particularly on crustaceans and turtles, due to their burrowing nature, making them difficult to find. Traps will also be used to reduce the load of small fish and eels from the waterbody.
3. The morning prior to dewatering commencing; fish load will be further reduced using scoop, dip nets and seine nets.
4. Suitable release locations are to be selected due to their:
 - Proximity to site,
 - Access,
 - Similar aquatic values; and
 - Size.
5. It is the responsibility of the site supervisor to ensure the required erosion and sediment control measures are installed prior to dewatering works commencing.

Water Quality during Dewatering

1. Water quality testing will be done twice daily throughout the dewatering process, to monitor the water quality for things such as declines in oxygen saturation levels that may have a detrimental impact on the aquatic occupants of the water body.
2. Acid sulphate soils may be exposed during the dewatering process and could have a significant impact on the water quality of the waterbody.
3. If the water does not meet the required standard to be released, dewatering works should be suspended until the water has been treated and meets the standard for release.
4. Acid Sulphate soils should be managed according to the State Planning Policy 2/02, Planning and Managing Development Involving Acid Sulphate Soils, State Planning Policy 2/02 Guideline, Acid Sulphate Soils and Queensland Acid Sulphate Soil Technical Manual, Soil Management Guidelines.

Water Removal

Responsibility: Site Supervisor

During Water Removal

To remove the last of the water out of the dam a few sumps will be dug out within the waterbody and the pumps (**with fish shields**) will be placed into these sumps. This will reduce the risk of fish being left in isolated ponds that are hard to reach and it will also make it easier to relocate the last few fish when all the water is almost drained.

The water level will then be reduced by increments of 25%, this will allow as many fish as possible to be removed. If the water level drops too fast there will not be enough water or oxygen to support all the fauna within the waterbody.

Aquatic Fauna Management Measures

Responsibility: Environmental Contractor

Aquatic Fauna Guidelines

All fish are to be removed, stored, and released as quickly as possible. Animals will be transported within large, aerated tubs. Storage containers are to be filled with water from the waterbody that the fish were captured out of and are to be sized appropriately to allow for fish to swim comfortably in an upright position. Containers are also to be soft with rounded edges and have a lid to provide a darkened environment for captured fauna. Overcrowding is to be avoided, with approximately 0.2kg of fish per litre of water considered appropriate. Water conditions within the containers are to be monitored continuously and the water should be changed hourly to ensure appropriate levels of oxygen are maintained.

Fish are to be released carefully, with the container placed in the water to allow fish to swim away. All fish are to be handled using wet hands or a wet towel and Shimano enviro nets will be used which minimises the risk of removing any of the fish's protective mucus coating and reduces the possibility of split fins or any damage to their eyes. See for potential release sites of aquatic fauna.

Only native species are to be relocated, any pest or exotic species captured will be humanely euthanased. Where prohibited or restricted invasive animals or noxious fish listed under the Biosecurity Act 2014 are captured, these will be euthanased. Methods used will be in accordance with relevant authority guidelines and the ANZCCART's Euthanasia of Animals Used for Scientific Purposes (2001).

Exotic or pest plant species will be disposed of appropriately to avoid the spread of weeds into waterways.

To further reduce the risk of fatalities in the final dewatering stage due to low levels of dissolved oxygen, there will be several suitably qualified staff on site to ensure that the fish are relocated as fast as practical.

Tadpoles will be collected with soft handheld dip nets. Any handling of amphibians will follow the DES Interim Hygiene Protocol for Handling Amphibians.

Table 5.1 FAUNA & VEGETATION MANAGEMENT MEASURES

787 Ripley Road, South Ripley, QLD 4306

5.13 Nest Box Management Measures

This site is located within the Ipswich City Council, which does not advise the protocol for calculating nest boxes for installation. Therefore, we will use the Sunshine Coast Council’s conditions as a guide, which is as follows:

- When a hollow is removed and it is *occupied*, a nest box must be installed at a 1:1 ratio, when a hollow is *not occupied*, nest boxes must be installed at a 3:1 ratio (three unoccupied hollows to one nest box; round up where number is not a factor of 3).

The aim of nest boxes is to compensate for the loss of habitat features through the development of the site.

At least half of the required nest boxes are recommended to be installed either prior to the commencement of clearing or within 7 days of the clearing having taken place. The remaining nest boxes are to be installed within 30 days of completing clearing works.

Types and sizes of nest boxes should reflect fauna on site, and/or a nest box management plan if available. The exact location awaits council approval, and a tree climber will select the safest, most appropriate trees on the day of installation. The exact types of next boxes appropriate for each tree will also be confirmed on the day of installation, and GPS coordinates will be updated for monitoring.

Nest boxes will be fixed to the tree using a method designed to ensure no damage is done to the tree as it matures.

Nest boxes are to be maintained for a minimum of 12 months post-installation. An annual survey is proposed to inspect all installed nest boxes. Any severely damaged boxes found during the annual survey will be replaced.

6 Nest Box Recommendations

The survey area contains three (3) trees with a DBH greater than 800 mm.

Therefore, in line with the development conditions outlined in **Section 5.13** of the Fauna & Vegetation Management Measures above, twenty-eight (28) nest boxes are recommended for this Project.

Where possible, habitat features are to be retained and placed in retained vegetation in place of a nest box.

Table 6.1 displays the calculations made for nest boxes recommended for this Project.

Table 6.1 Nest Box Calculations			
Description	Count	Calculations	Recommended Nestboxes
Habitat Trees without hollows	0	0 X 3	0
Hollows within Trees	27	27 X 1	27
Hollows within arboreal termite mounds	1	1 X 1	1
Occupied hollows			0
Total			28

7 Conclusion

A pre-clearance field survey has been undertaken to determine risk and management strategies for fauna management throughout clearing activities undertaken by Shadforth Civil Contractors.

No (0) sightings of conservation significance fauna species, or breeding places were observed within the survey area during the pre-clearance field survey. All habitat features and fauna signs were identified across the survey area and recorded.

To manage the risk to any native fauna present during the proposed clearing activities, the fauna management measures within this document are to be adhered to for the duration of the Project.

The survey area is mapped as a 'high-risk area' under the DES Protected Plants for a Survey Trigger mapping, this triggers the requirement for a protected plant flora survey of the clearing impact area prior to any clearing activities.

8 Recommendations

Native street planting is recommended to reduce the amount of lost foraging habitat. Any koala fodder foliage that is cleared should be given to a local wildlife carer or rehabilitation centre.

Twenty-eight (28) nest boxes are recommended for this Project. The amount of nest boxes to be used is subject to change according to clearing works and post-clearance survey. Where possible, habitat features are to be preserved and placed in retained vegetation in place of a nest box.

Recommendation has been made to ensure pre-clearing checks are undertaken 24 hours prior and directly prior to clearing including canopy searches for fauna. The clearing is to be undertaken sequentially with a minimum of one (1) FSC per clearing front. Clearing activities should maintain appropriate habitat links for self-dispersal by fauna into adjacent areas where possible and allow for safe capture and relocation away from road infrastructure and areas to be disturbed as part of the Project.

Notification procedures for habitat features identified in **Section 5.9** are to be followed where any wildlife interactions are likely to or have occurred during the pre-clearance field survey, 24-hour pre-clearing checks, and approval prior to the commencement of clearing activities.

It is recommended that the findings of this pre-clearance report are considered during vegetation clearing, and construction activities to ensure that potential disturbances to ecological values are minimised and to prevent shifts away from remnant vegetation communities.

The results of this assessment should be provided to the relevant regulatory authorities for their consideration during the clearing permit assessment process. A post-clearing report is required at the conclusion of clearing activities.

Drone Flight

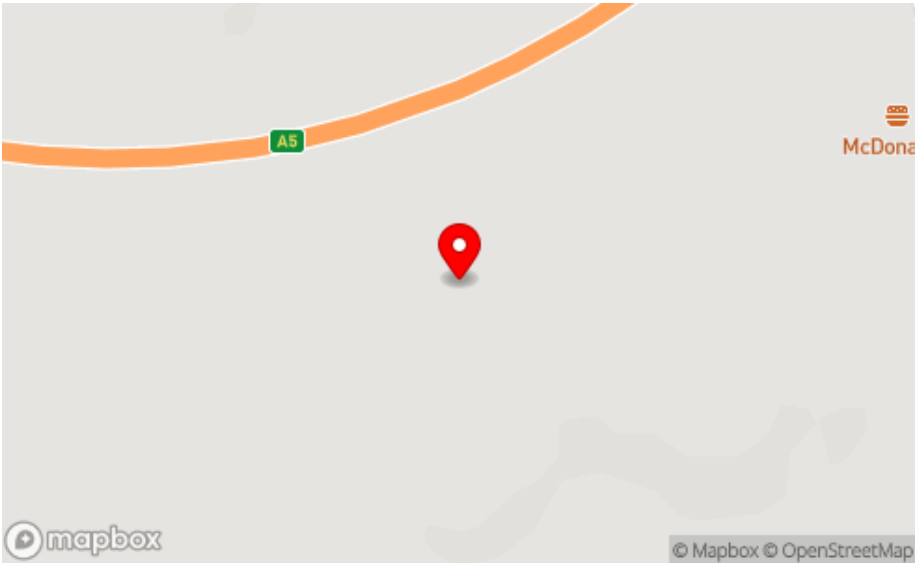
Project details

Date	17/10/2024
Start time	06:36 AM (10 GMT)
Project	60-SCC2205-D:Shadforth:775 Ripley Rd, Ripley :Post-Clearance Report
Client	Shadforth
Site address	775 Ripley Rd, Ripley
Project code	60-SCC2205-D

Weather conditions

Weather condition	Cloudy
Wind speed	Light breeze (6-11km/h, 4-6 knots)
Wind direction	S

Details

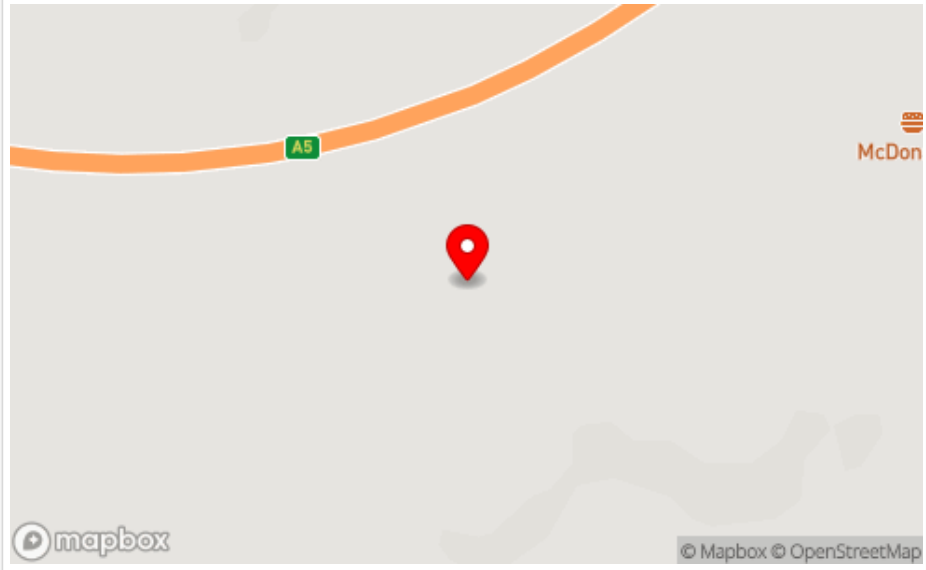
Operator	Luke Lee
CASA - ARN	1233070
Location / GPS	
	Lat: -27.6923545 Long: 152.797774
I'm not flying in a restricted space?	No
Drone	Mavic 2 Enterprise Advanced

Drone Flight


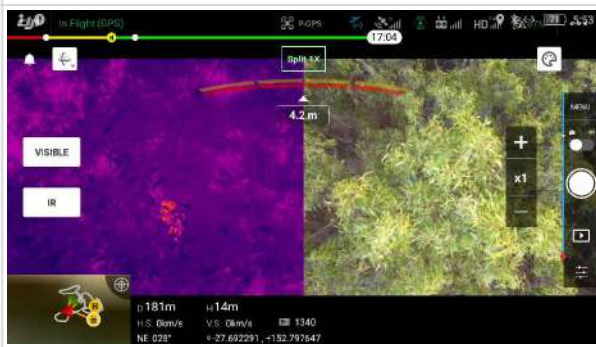
Extent of flight	
Purpose of flight	Pre-clearance fauna inspection

Fauna species detected - # 1

Section 1

Targeted Species- common name	koala
Targeted Species- scientific name	Phascolarctos cinereus
Location / GPS	
	Lat: -27.6923097 Long: 152.7976949

Drone Flight

Photo	
	
Federal (EPBC) status	E
State (NCA) status	E

Fauna species detected - # 2



Section 1

Targeted Species- common name	eastern grey kangaroo
Targeted Species- scientific name	Macropus giganteus
State (NCA) status	C

Habitat features/ fauna signs detected

Habitat features/ fauna signs

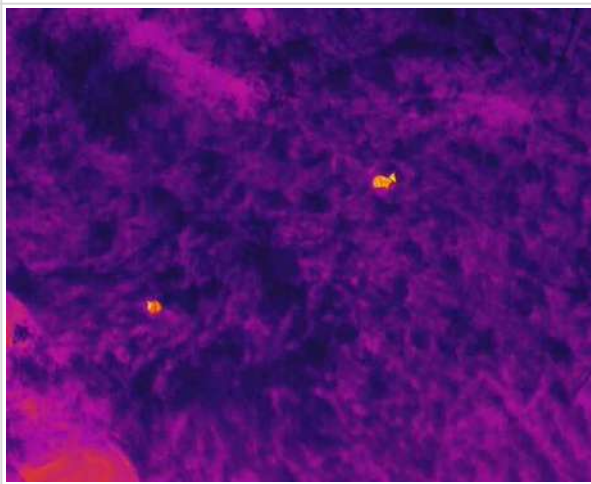
Drone Flight

<p>Location / GPS</p>	
	<p>Lat: -27.69124236055756 Long: 152.7965996414423</p>
<p>Habitat feature, Fauna sign</p>	<p>Fauna signs</p>
<p>Total number of hollows</p>	<p>0</p>
<p>Fauna signs</p>	<p>Stick nest</p>
<p>Comments</p>	<p>active pacific baza nest</p>
<p>Photos (optional)</p>	

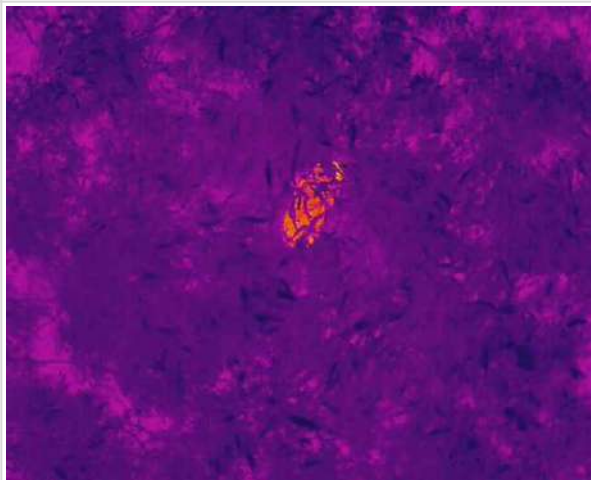
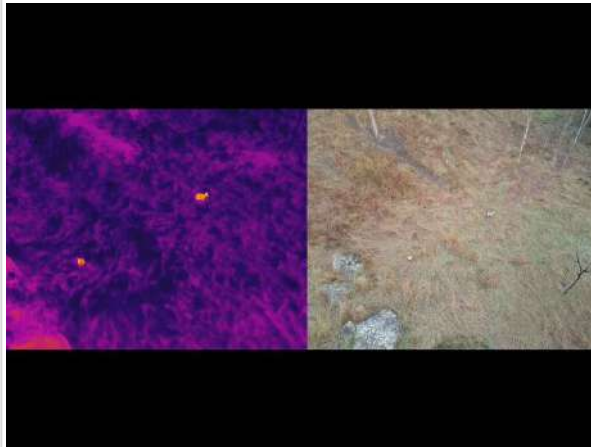
Drone Flight



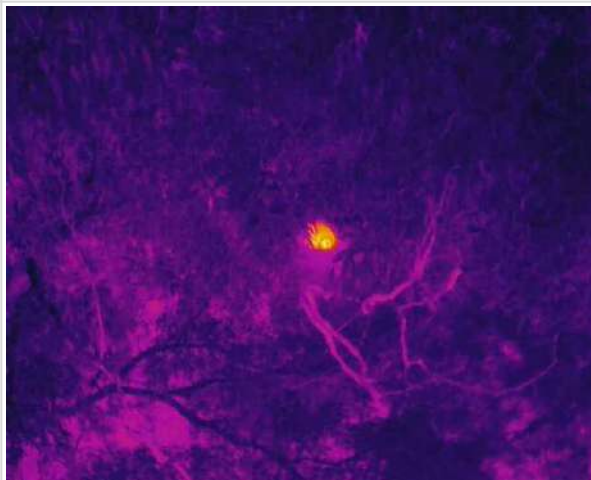
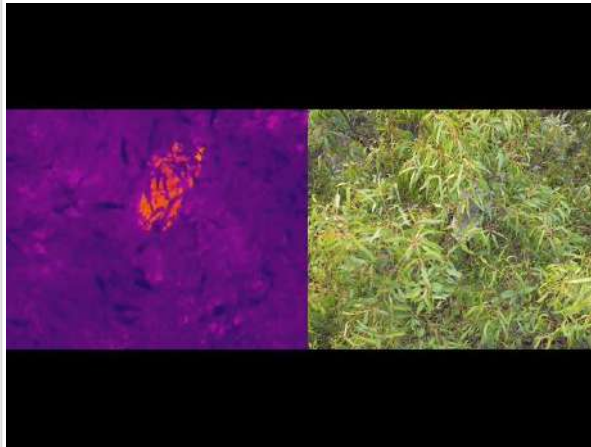
Multi Photo



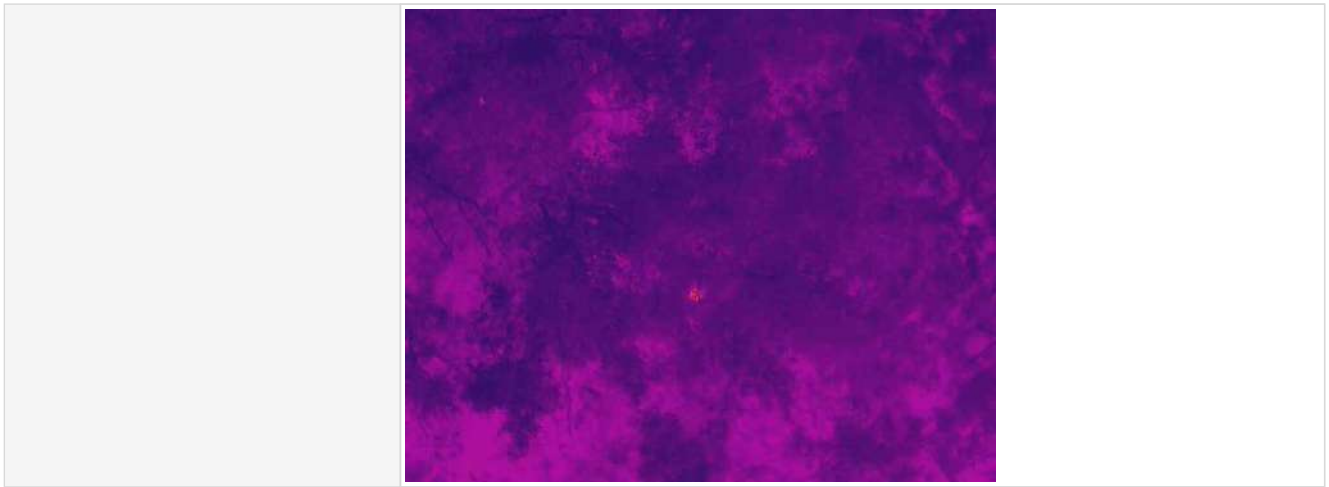
Drone Flight



Drone Flight



Drone Flight



Appendix D

QTFN Annual Offset Area Management Report – Year 7



Koala Crossing Offset Area Management Report

Year 7

EPBC2015/7513

V1 | 12 February 2025

Document Control

Current document

Title	Koala Crossing Offset Area Management Report Year 7 EPBC 2015/7513
Date	12/02/2025
Prepared by	Chagi Weerasena

Document Issue

Issue	Date	Prepared by	Checked by
Draft	29/01/2025	Chagi Weerasena	Kayleen Campbell
Final	12/02/2025	Chagi Weerasena	Liz O'Brien

Disclaimer

This report has been prepared for BCove 4 Pty and Ripley Town Holdings Pty Ltd by the Queensland Trust for Nature. QTFN cannot accept any responsibility for any use of or reliance upon the contents of this report by any third party.

Reports and/or Plans by Others

Reports and/or plans by others may be included within this Offset Area Management Report to support the document.

QTFN acknowledges the Traditional Custodians of Country throughout Australia and their diverse and continuing connections to land, sea and community. We acknowledge they were the first conservationists and scientists and have cared for this land for future generations. We pay our respect to their Elders past, present and emerging and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

This report was prepared on the Traditional Lands of the Jagera and Turrbal Peoples.

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CHAPTER 1: INTRODUCTION

The purpose of this document is to report on the management actions and outcomes required for the provision of koala (*Phascolarctos cinereus*) habitat offset, by Approval EPBC 2015/7513 issued pursuant to sections 130 and 133 of the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). The focus of the plan is on the protection and enhancement of the koala habitat associated with the secured offset for BCove 4 Pty Ltd and Ripley Town Holdings Pty Ltd (EPBC 2015/7513) (henceforth referred to as the offset area). This document will report in accordance with stipulations and requirements laid out in the Offset Area Management Plan (OAMP).

The structure of the document reflects the requirements of the Department of Climate Change, Energy, the Environment and Water (DCCEEW) and details the key threatening processes which could impact on the existing koala population. The chapters that comprise the document report on the overall health of the koala population, vegetation composition, and actions to minimise threats to koalas. The management regime put in place by the Queensland Trust for Nature (QTFN) will enhance existing koala habitat through the exclusion of land practices detrimental to the site and will track improvements and progress in this annual offset report over the active management period.

This report is the seventh submitted since the approval date for the offset on 16 October 2017 and commencement of the action on 16 December 2019. This reporting period includes data from December 2023 to December 2024 (henceforth referred to as the reporting period) and is considered as the ‘Year 7’ report. The past and future reporting requirements are listed below in Table 1.

Table 1 – EPBC 2015/7513 reporting requirements

Milestone	Due Date	Status
Approval of EPBC 2015/7513	-	16 October 2017
Commencement of the action	-	16 December 2019
Year 1 – Baseline	February 2019	Submitted October 2018
Year 2 – intensive year review	February 2020	Submitted November 2019
Year 3	February 2021	Submitted January 2021
Year 4	February 2022	Submitted February 2022
Year 5	February 2023	Submitted January 2023
Year 6	February 2024	Submitted January 2024
Year 7	February 2025	Current report
Year 8		
Year 9		
Year 10		

Summary of compliance

This document stands as a compliance report for the final EPBC 2013/713 Approval Conditions (Table 2). Table 3 summarises compliance measures from the OAMP for all conditions relevant to this reporting period.

It is acknowledged that any non-compliance with the conditions must be reported by no later than five business days after becoming aware.

Table 2 – Compliance summary of approval conditions relevant to this reporting period

Approval Condition	Status
7. For the life of the approval, ensure there is no net loss in the extent of koala habitat that is legally secured at the offset site.	Compliant
8. Within 10 years after legally securing the offset, the quality of koala habitat is improved, relative to the baseline quality of 6, across 50 percent of the offset site.	Ongoing
9. Prior to the expiry of the approval, the koala habitat across 100 percent of the offset site is of no less than quality 8.	Ongoing
10. Prepare and implement a monitoring plan for the life of the approval.	Compliant

Table 3 – Compliance summary and checklist under the OAMP for all conditions relevant to this reporting period

Key Actions and Monitoring Requirements	Reporting Requirements and Performance Indicators	Status
Koala Occurrence		
<ul style="list-style-type: none"> Outside of the formal koala density survey event, opportunistic koala sightings to be recorded (location and date) within the Offset Area Assessment Report. 	<ul style="list-style-type: none"> Incorporate opportunistic koala sightings into the Annual Offset Area Assessment Report. 	Ongoing. Details included in this report.
Vegetation Composition, Habitat Connectivity and Dispersal Barriers		
<ul style="list-style-type: none"> Weed assessments and monitoring to be undertaken annually. Retain all vegetation in remnant and mature regrowth areas except where necessary for the removal of weeds, fencing or fire break trails. Monitor for illegal clearing in the area of any natural events that may impact habitat connectivity. Ongoing retention and recruitment of koala food trees. Firebreaks and fire control lines to be inspected at a minimum quarterly or after major storm events. 	<ul style="list-style-type: none"> Monitoring results to be recorded in annual Offset Area Assessment Report. 	Ongoing. Details included in this report.
Predators (wild dogs, foxes and feral cats)		
<ul style="list-style-type: none"> Abundance surveys for predators to be undertaken bi-annually by a suitably qualified person. Implement an offset area wide predator control program. The control program and techniques 	<ul style="list-style-type: none"> Results of all presence/absence and abundance surveys will be reported on an annual basis as a component on the Annual Offset Areas Assessment Report. 	Ongoing. Details included in this report.

(trapping, baiting, shooting) will be informed based on the results of the abundance survey.	<ul style="list-style-type: none"> All records of koala injury or death resulting from a dog attack are to be reported within the annual Offset Areas Assessment Report. 	
<ul style="list-style-type: none"> Presence/absence surveys for predators are to be undertaken each two months by the landholder. 		
<ul style="list-style-type: none"> Opportunistic monitoring of and koala/predator interactions in the form of injured and/or koala mortality records. 		
Vehicle Strike		
<ul style="list-style-type: none"> Record any koala injury/mortality on roads within offset area of Flinders Road. Report injuries/deaths to LGA. 	<ul style="list-style-type: none"> Report any koala injuries/deaths to Local Government authority and relevant State Government department. Incidents to be recorded in annual Offset Area Assessment Report. 	No koala injury / mortalities occurred during the reporting period.
Fire		
<ul style="list-style-type: none"> Install firebreaks and fire trails. Inspect and undertake maintenance in compliance with OABMP. 	<ul style="list-style-type: none"> Monitoring results and maintenance log will be detailed within the annual Offset Area Assessment Report. 	Ongoing. Details included in this report.
<ul style="list-style-type: none"> Prescribed burning will be undertaken in consultation with, and under the guidance of the Queensland Rural Fire Brigade. 		
Disease and Pathogens		
<ul style="list-style-type: none"> To reduce the risk of introducing Chlamydia and Koala retrovirus into the resident population, uncontrolled translocation of koala is not permitted within the offset area. 	<ul style="list-style-type: none"> Confirmation of koala translocation activity within the offset area (if approved) is to be included within annual Offset Area Assessment Reports. Incidence of koalas exhibiting symptoms of disease to be reported within annual Offset Area Assessment Report. 	Ongoing. Details included in this report.
<ul style="list-style-type: none"> Enforce biosecurity procedures for all persons and vehicles that may carry vegetation pathogens known to affect koala food and shelter trees. 		
Hydrological Change		
<ul style="list-style-type: none"> If any actions are proposed that may significantly impact the current hydrological regime and therefore potentially impact koala habitat within the offset area, then actions are required. 	<ul style="list-style-type: none"> Where approved hydrological change has occurred within the offset area, monitoring of the impact to the site's vegetation communities will be a component of an annual site assessment. 	No hydrological changes were made during the reporting period.

CHAPTER 2: SETTING AND LOCALITY

By way of Deed, BCove 4 Pty Ltd and Ripley Town Holdings Pty Ltd secured delivery of an OAMP and registration of a Voluntary Declaration under the *Vegetation Management Act 1999* (Qld) of 65.69 ha imposed by EPBC Approval 2015/7513 as part of the offset for the Ecco Ripley development.

The voluntary declaration for was secured on 6 of June 2018 and reporting for the offset area will include information from 2018 onwards.

Koala Crossing Locality

The offset area pertaining to EPBC 2015/7513 is managed as part of a larger conservation property, Koala Crossing, located on Mount Flinders Road, Peak Crossing, Queensland. Koala Crossing comprises of eight lots; 86, 87, 88, 89 on RP892014, Lot 119 on CH311527, Lot 107 on CH311135, Lot 137 on CH311786 and Lot 138 on CC127 totalling approximately 654 ha (Map 1). The property was purchased by the QTFN in 2014 to protect regrowth vegetation from future development, with the aim of utilising the property for offsets. The delivery of third-party project impact offsets has provided a means of funding ongoing restoration and revegetation of large parts of the property.

The tenure of the property is freehold, wholly owned by QTFN. It is located within the Scenic Rim Regional Council Local Government Area. In 2020, four Nature Refuge (NR) agreements (Koala Crossing NR, Cockatoo’s Corner NR, Wallabies Knoll NR and Glider’s Glade NR) were established under the *Nature Conservation Act 1992* (Qld) pertaining to lots 86, 87, 88, and 89 on RP892014 (Map 1). These NR agreements will protect and enhance the natural environment surrounding the offset area beyond the life of the offset agreement term.

On a regional scale, the property is part of the Flinders Karawatha Corridor, the largest remaining contiguous stretch of open eucalypt forest in south-east Queensland (SEQ) (EHP, 2014). The corridor stretches for 60 km from the Karawatha forest in Brisbane, through Flinders Peak to Wyaralong Dam near Boonah, and encompasses 56,350 ha of land. It is an important wildlife corridor, providing habitat for a number of vulnerable species including the tusked frog (*Adelotus brevis*), glossy black-cockatoo (*Calyptorhynchus lathami*), powerful owl (*Ninox strenua*), black-breasted button-quail (*Turnix melanogaster*), spotted-tailed quoll (*Dasyurus maculatus maculatus*), brush-tailed rock-wallaby (*Petrogale penicillata*), grey-headed flying-fox (*Pteropus poliocephalus*) and koala.

Climate data for the area gives an average maximum and minimum temperature of 27°C and 13.9°C respectively for 2024 (weather station 040004) (BoM, 2024). The average annual rainfall for 2024 was 100 mm (weather station 040793) (BoM, 2024), with the wettest month in January (342 mm) and the driest month in June (18.8 mm).

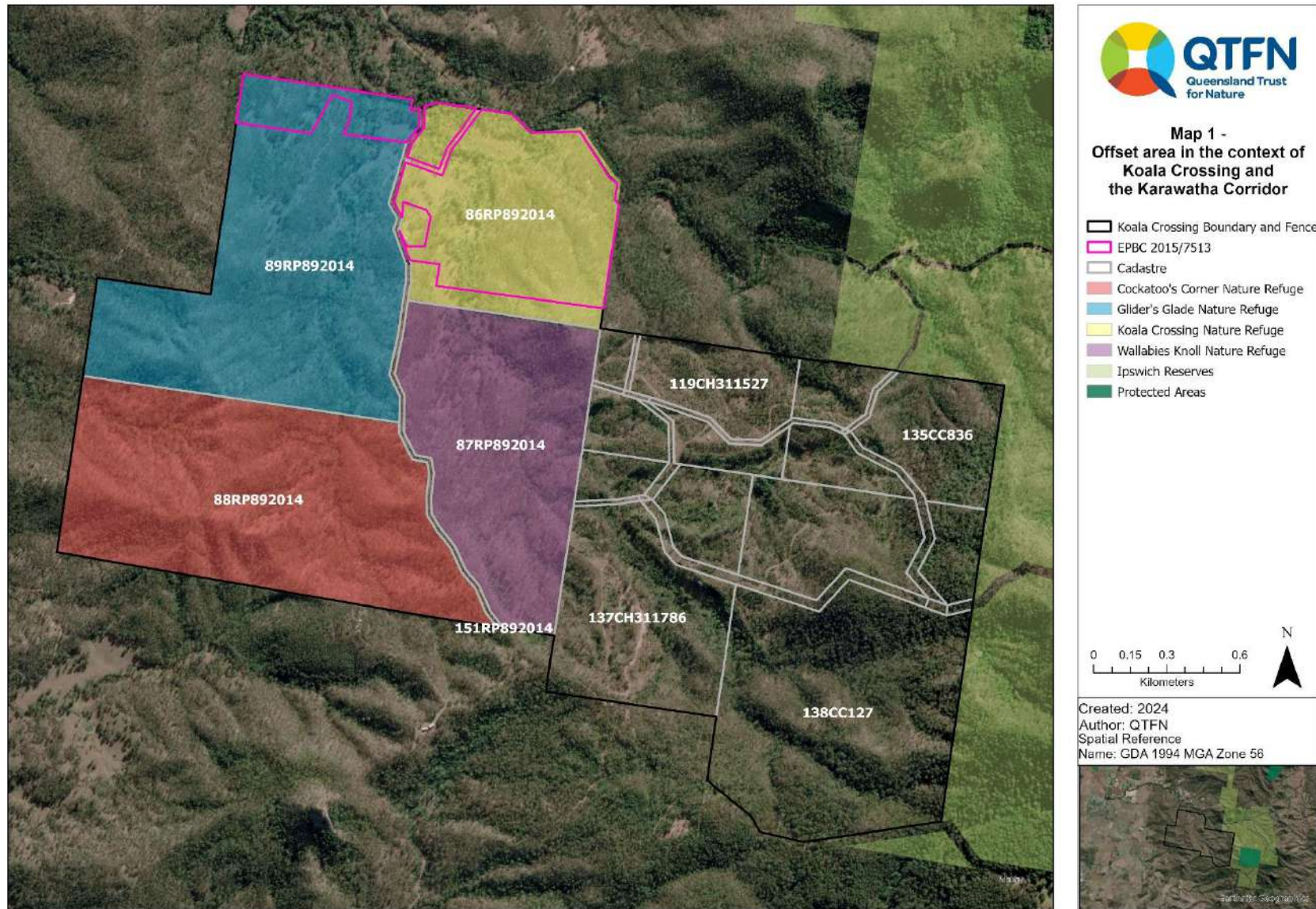
The offset area contains areas of revegetation and four Regional Ecosystems (REs) (Map 5):

- 12.3.3 Endangered: *Eucalyptus tereticornis* woodland on Quaternary alluvium;
- 12.3.7 Least concern: *Eucalyptus tereticornis*, *Casuarina cunninghamiana* subsp. *cunninghamiana* +/- *Melaleuca spp.* fringing woodland;
- 12.8.24 Endangered: *Corymbia citriodora* subsp. *variegata* open forest on Cainozoic igneous rocks especially trachyte; and
- 12.9-10.2 Least concern: *Corymbia citriodora* subsp. *variegata* +/- *Eucalyptus crebra* open forest on sedimentary rocks.

The highest point of the site is 210 m above sea level on the eastern side, close to the border of lots 86 and 87 RP892014. The Geological Survey of Queensland 1:100,000 Ipswich Geological Map (DME, 2008)) lists the geology as:

- Qa SEQ: Quaternary; clay, silt, sand, gravel, flood plain alluvium
- Tit SEQ: Tertiary: trachyte (anorthoclase and riebeckite trachyte)
- Jbmk: Jurassic; lithofeldspathic labile and sublabile to quartzose sandstone, siltstone, shale, minor coal, ferruginous oolite marker
- Jbmg: Jurassic; lithic labile and feldspathic labile sandstone

Map 1 – Offset area in the context of Koala Crossing and the Karawatha Corridor



CHAPTER 3: OFFSET AREA REPORT

This chapter outlines the agreed requirements outlined in the OAMP and the final Approval Conditions set by the relevant parties. For each asset, monitoring and results are discussed in line with the reporting requirements, and relevant conservation management actions are stated.

Reporting period

This document reports on monitoring and works completed between December 2023 to December 2024.

3.1 KOALA OCCURRENCE

Relevant actions	Reporting requirement
<ul style="list-style-type: none"> Outside of the formal koala density survey event, opportunistic koala sightings to be recorded (location and date) within the Annual Offset Area Assessment Report. For full OAMP conditions for koala occurrence, see Appendix 1. 	<ul style="list-style-type: none"> Opportunistic koala sightings to be incorporated into the Annual Offset Area Assessment Report.

Koalas are under significant threat in SEQ due to habitat encroachment by urbanisation, predation by feral and domestic animals and traffic accidents caused by increased road networks and motor vehicles (Youngentob, Marsh, & Skewes, 2021). Koala Crossing was purchased by QTFN with the intention of finding sustainable funding models to preserve koala habitat and provide linking territories to the Flinders-Goolman Conservation Estate and the Flinders Karawatha Corridor.

i. Monitoring in this period

This report will document the continued koala observations and monitoring within the offset area, in line with the requirement of the OAMP. In this reporting period, methods to monitor koalas include camera trapping, opportunistic scat collection, Spot Assessment Technique (SAT), opportunistic visual sightings and scat collection, and Remotely Piloted Aircraft (RPA) surveys.

Camera trapping

Remote camera traps were deployed over two periods during the reporting period: summer 2023 and winter 2024. The summer 2023 camera trapping session captured data between 9 November 2023 and 19 December 2023, and the winter 2024 session captured data from 15 July 2024 to 11 September 2024.

Eleven camera trapping stations (with Reconyx Hyperfire HC600 remote-sensing cameras) were deployed across Koala Crossing, with two stations within the offset area (Map 7). Relative Abundance Indices (RAI), which is a relative measure of abundance based on the frequency and duration of time each predator species is recorded on camera (i.e. how many are there relative to survey time), are calculated using a standardised set of 40 trapping days, with an independence threshold of 10 minutes (i.e. each observation of an animal 10 minutes after the first observation is considered a new observation) and analysed using the software Camelot.

Opportunistic scat collection and visual observations

Opportunistic observations of koalas and koala scat across the offset area and entire Koala Crossing property are to be recorded. This includes recording the date, time and GPS location of the observation into the Koala Crossing koala sightings register.

SAT survey

Koala activity levels were determined through SAT surveys (Phillips & Callaghan, 2011) conducted by Ecosure in April and May 2024. The SAT involves identifying a non-juvenile tree of any species within the subject site that is either observed to have a koala or scats or is known to be a food tree or otherwise important for koalas, and recording any evidence of koala usage of that tree including presence, identifiable scratches or scats. The nearest non-juvenile tree is then identified, and the same data recorded. The next closest non-juvenile tree to the first tree is then assessed and so on,

until 30 trees have been surveyed. Forty-nine SAT sites were surveyed throughout Koala Crossing, with six sites within the offset area (K08, K09, K12, K13, K29.2 and K30) (Map 3).

Remotely piloted aircraft surveys

RPA surveys were undertaken by Ecosure in May 2024. One RPA team, consisting of two pilots, was utilised. One person acted as the pilot, with another acting as a wildlife spotter. RPA flights were undertaken at night where thermal imaging was utilised to detect the heat signatures of koala and other incidental fauna. Five survey plots of approximately 25 ha in size were established following diurnal site inspections and preparation of the flight plans. Four sites were surveyed, with the fifth RPA survey plot acting as a back-up (Ecosure, 2024).

ii. Results and Management Outcomes

Camera trapping

One koala was recorded via camera trapping during the reporting period at camera C (RAI = 0.227) on 20 August 2024 at 3 am (Photo 1). While koalas were not observed on camera traps within the offset area itself, the vegetation within the offset area provides foraging and dispersal habitat (demonstrated via visual observations from previous years and presence of scat from SAT survey (Map 3) and vegetation connectivity within Koala Crossing).



Photo 1 - Koala at camera C during winter 2024 session

Opportunistic scat collection and visual observations

Koala scat was not identified opportunistically within the offset area or throughout Koala Crossing during the reporting period. No koalas were observed opportunistically within the offset area or throughout Koala Crossing during the reporting period.

SAT survey

Koala scat was identified at three SAT sites (detection rate = 50%) within the offset area (Map 3). Scats were recorded at 24% of SAT sites at Koala Crossing. On average, 10 trees were surveyed before a scat was recorded within the offset area. At K08 and K29.2 koala activity was 3.3% which is consistent with a medium (normal) use of the environment within an East Coast (low) density population (Phillips & Callaghan, 2011). Koala activity was high (16.66%) at K09, with five trees recorded with koala scat.

K08 is on the edge of a revegetation area and visual observations of koalas were recorded in that area in 2021 and 2023 (Map 3), which suggests that koalas are moving through revegetated areas.

Remotely piloted aircraft surveys

No koalas were detected within the offset area using the RPA methodology however, one koala was recorded on the south-western side of Koala Crossing in *Corymbia/Eucalyptus* open woodland (Map 2).

Koala-predator interactions

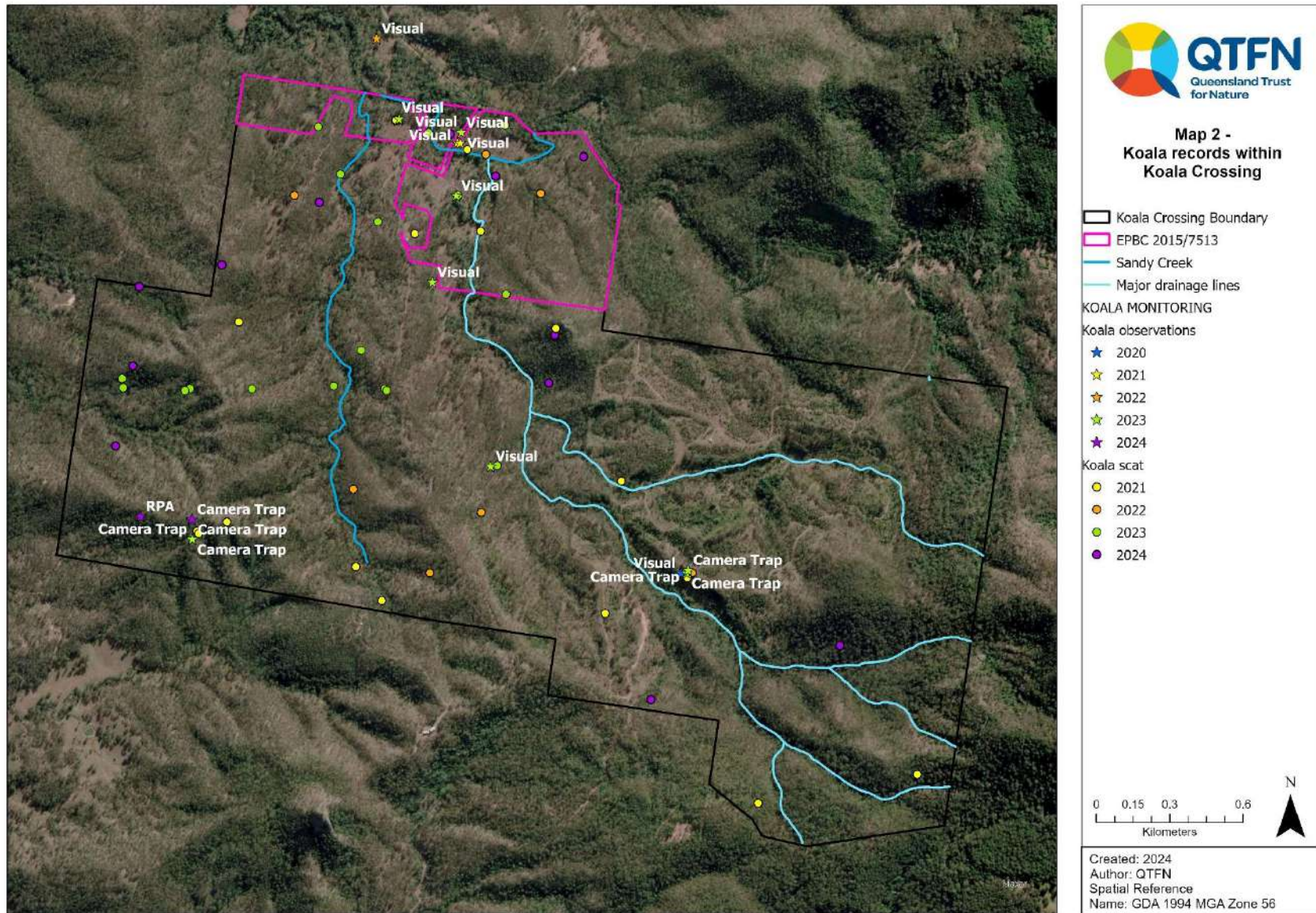
No koala-predator interactions were recorded during the reporting period.

Management outcomes

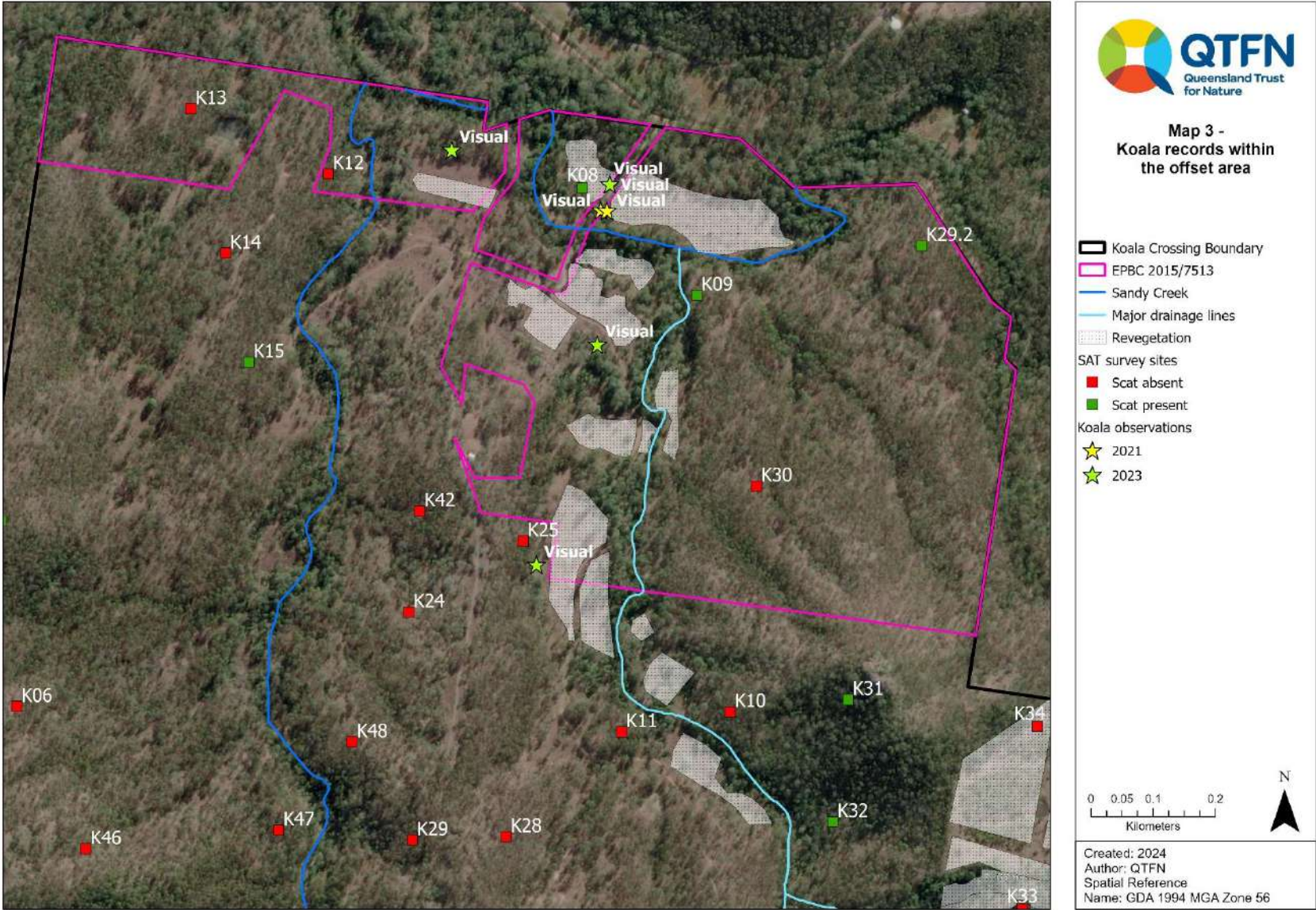
Presence of koalas will continue to be surveyed throughout the years. Additional methods to identify koalas, such as use of airborne eDNA and audio recorders, are currently being considered to increase detection efforts.

In addition to the existing population, Koala Crossing will continue to act as a release site for rehabilitated koalas that were found close to the property.

Map 2 – Koala records within Koala Crossing



Map 3 – Koala records within the offset area



3.2 VEGETATION COMPOSITION

Relevant actions	Reporting requirement
<ul style="list-style-type: none"> • Weed assessments and monitoring to be undertaken annually. • Retain all vegetation in remnant and mature regrowth areas except where necessary for the removal of weeds, fencing or fire break trails. Monitor for illegal clearing in the area of any natural events that may impact habitat connectivity. • Ongoing retention and recruitment of koala food trees. • Firebreaks and fire control lines to be inspected at a minimum quarterly or after major storm events. • For full OAMP conditions for vegetation composition, see Appendix 2. 	<ul style="list-style-type: none"> • Monitoring results to be recorded in annual Offset Area Assessment Report.

The maintenance of the koala population is dependent on the health, age, and distribution of koala food trees within Koala Crossing and the offset area. Monitoring and management of the vegetation is an essential part of the management plan.

In this reporting period, activities focus on annual weed monitoring and assessing vegetation and koala food tree condition through BioCondition assessments.

i. Monitoring in this period

Weed assessments continue to be conducted annually and compared to results from the baseline survey of 2018. Surveys were conducted from 7 to 8 May 2024 by QTFN ecologists. Twenty-eight permanently marked transects throughout Koala Crossing were surveyed for non-native plant cover in a 100 m transect, with 21 points within each transect at 5 m intervals. Three weed transects (T1, T23 and T27) are located within the offset area (Map 4). Photo points were recorded at each transect so that the progress of the site could be monitored (Appendix 3). The target weed species identified in the OAMP as a threatening process to koalas is lantana (*Lantana camara*) (Melzer, Santamaria, & Allen, 2018). Whilst other weeds were measured for overall ecological health, the focus of the weed management is the control and eradication of *L. camara*, as it has the capacity to prevent koala movement and access to food and shelter trees (Melzer, Santamaria, & Allen, 2018).

Nineteen BioCondition assessments (Eyre, et al., 2015) were conducted throughout Koala Crossing by Ecosure between April and May 2024 (Map 5). Three BioCondition plots, BC07, BC08 and BC12, were located within the offset area (Map 4). BC07 and BC08 are located within RE 12.3.3, with BC07 in revegetation, and BC12 lies within RE 12.9-10.2 (Map 5).

ii. Results and Management Outcomes

Property-wide trends

Weed assessments

Lantana camara was present in 26 of 28 transects (89% occupancy – i.e. percentage of transects where *L. camara* is present). This is down from 93% in 2023, reflective of treatment conducted between January and June 2024 (Map 6). Weed treatment was undertaken in 1 ha grids throughout Koala Crossing. Majority of sites (57%) displayed a decrease in *L. camara* occupancy with 18% of sites remaining unchanged (Map 6). The mean transect coverage of 44% (i.e. on average, 44% of sampling points in each transect are occupied by *L. camara*) in 2024 decreased from 51% in 2023.

BioCondition Assessments

Seven plots showed an increase in overall BioCondition score (BC01, BC03, BC04, BC05, BC06, BC09 and BC10), with score increases ranging from 2 to 22 points. Three plots (BC02, BC07 and BC08) showed a decrease in BioCondition score, with score decreases of 11, 7 and 0.5 respectively. This is mainly due to a decrease in native grass and shrub species richness

and cover potentially from weed coverage encroachment. No decrease in landscape attribute scores were reported (Appendix 4). A comparison assessment cannot be made for BC11 to BC19 as these plots were newly added in 2024.

The current koala age tree structure throughout Koala Crossing, which is mostly comprised of young regrowth, shows promise for the development of koala habitat (Ecosure, 2024). The revegetation areas are showing a strong uptake and development of recruit trees. A lack of mature and large trees throughout Koala Crossing was observed during surveys. While koalas utilise trees across a wide range of size classes (Youngentob, Marsh, & Skewes, 2021), medium to large trees are favoured by koalas. These trees can provide thermal buffering for koalas during the day and have a greater quantity of food resources (Taggart, et al., 2023). The average diameter at breast height (DBH) of trees recorded within each SAT survey site was 24 cm.

Offset-specific trends

Weed assessments

Since 2018, *L. camara* has been observed within the offset area. A decline in *L. camara* occupancy was evident at T1 and T23, while T27 saw an increase (Map 6) (Appendix 3). The mean transect coverage remained stable at 29% in 2024. Low (below 15%) mean transect coverages evident between 2018 and 2020 were most likely caused by drought conditions between early 2017 to the end of 2019 (Nguyen, Wheeler, Hendon, Lim, & Otkin, 2021). La Niña conditions between 2020 and 2023 (Huang, Gillett, & Taschetto, 2024) had a strong influence on the growth rate of *L. camara* (Raghu, Osunkoya, Perrett, & Pichancourt, 2014), likely causing an increase in mean transect coverage over these years. In comparison to the entire Koala Crossing property, the offset area had a lower mean transect coverage of *L. camara* (Figure 1).

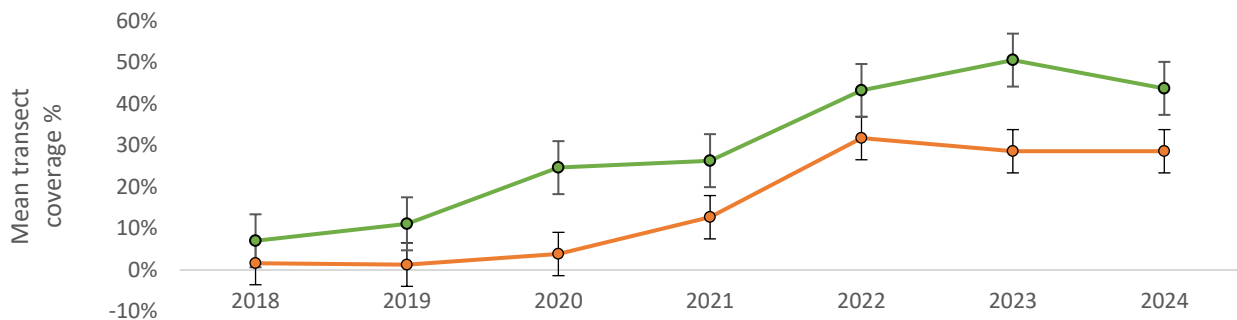


Figure 1 – Mean transect coverage (%) of *Lantana camara* at all transects in Koala Crossing ($n = 28$) (green) and the offset area ($n = 2$) (orange) between 2018 and 2024 (with standard error)

BioCondition assessments

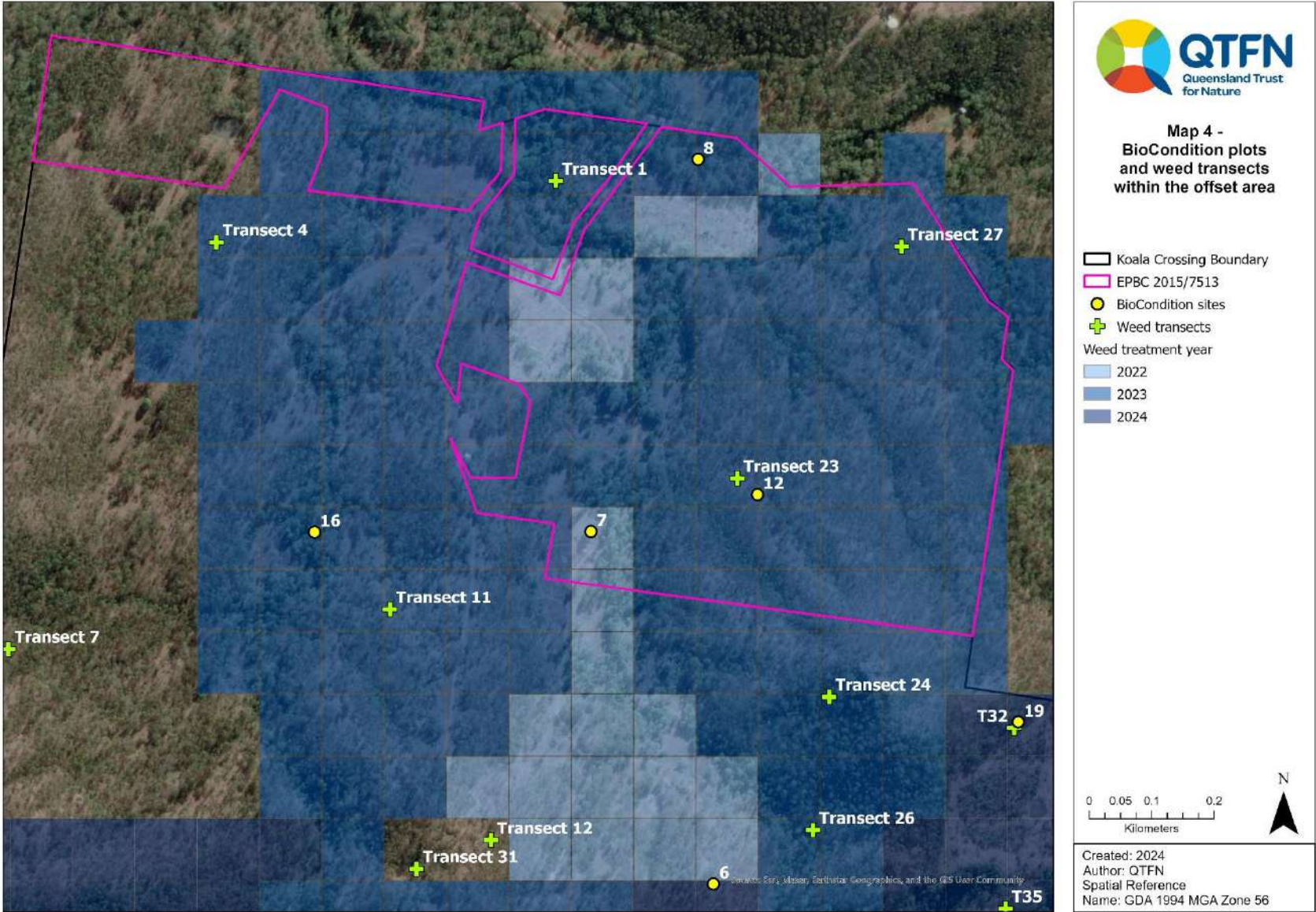
The BioCondition score for plot BC07 decreased from 62 (out of 100) in 2020 to 55 in 2024 and BC08 decreased from 62.5 in 2020 to 62 in 2024 (Appendix 4). Most of the declines in BioCondition scores in BC07 is attributed to the use of different REs in the benchmark assessment. The 2020 assessment utilised RE 12.3.7, whereas the current survey employed RE 12.3.3, which was more aligned with the current RE mapping of the area (Ecosure, 2024). BC08 experienced a 0.5-point decline in BioCondition score which was attributed to a decrease in woody debris, native shrub and grass species richness, and grass and litter cover. This BioCondition assessment was the first assessment for plot BC12, which received a score of 66.5 out of 100.

Koala food tree species richness at BC07, BC08 and BC12 was five, four and three, respectively. These sites included the dominant food tree species on the property, *Corymbia citriodora*, *C. tessellaris*, *Eucalyptus crebra* and *E. tereticornis*, in addition to *E. melanophloia*. The tree age class structure shows that BC08 is one of the most suitable sites for koala, with K08 being one of the SAT sites with the most mature trees (Ecosure, 2024). Within areas of revegetation (BC07), koala food trees are predominately of 'recruit tree' status (1 – 3 cm DBH), with some juvenile trees (3 – 10 cm DBH). Recruitment of koala food trees is present at all BioCondition sites.

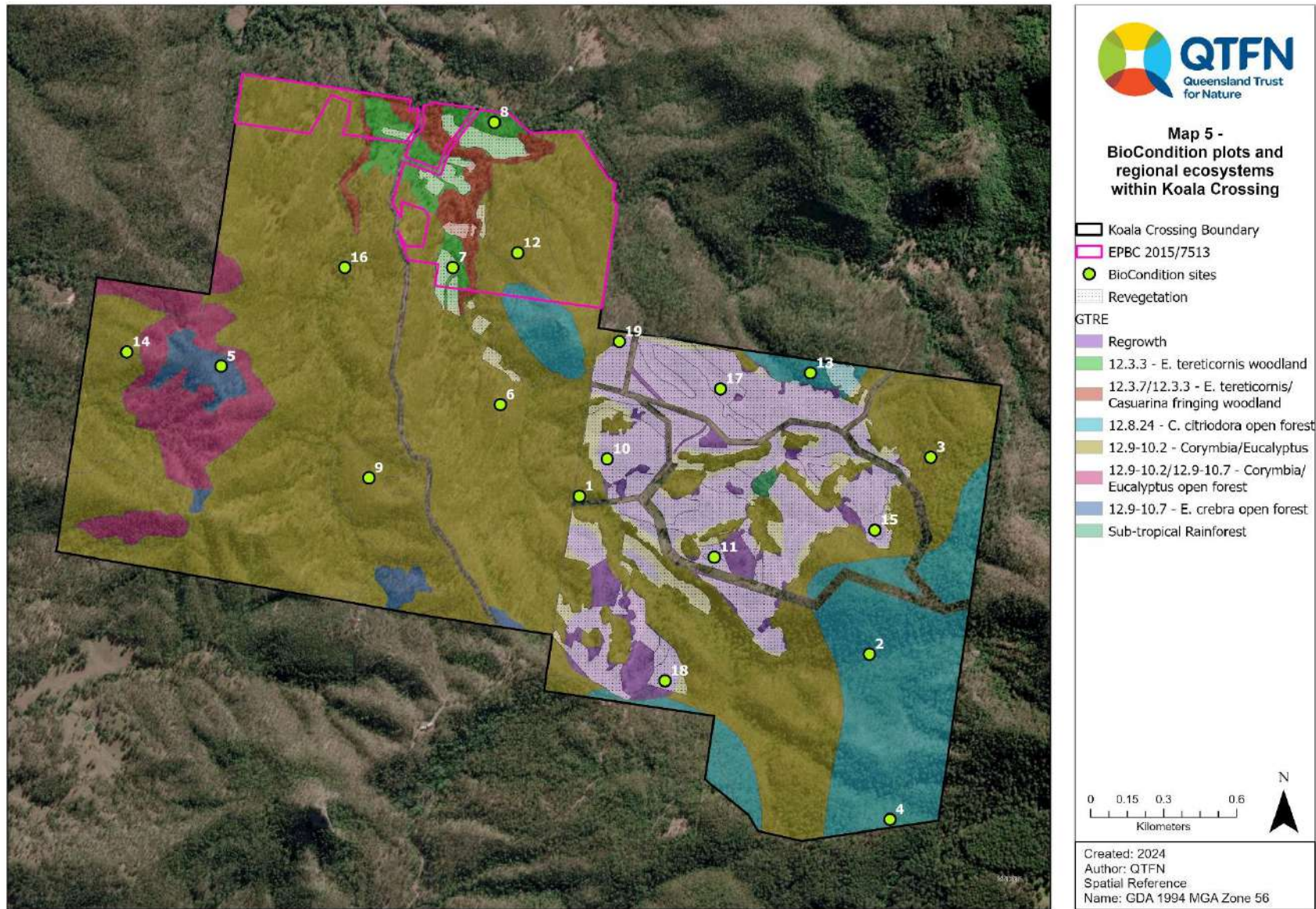
Management actions

The Weed Strategy 2020 – 2025 (Braun, Shapland, & Rossini, 2020) will continue to be followed to target areas of re-emerging and highly infested *L. camara*. Follow up control works have been conducted in the offset area and throughout Koala Crossing to address the re-emergence since monitoring occurred. Efforts to treat weed infestations will continue by managing weeds in 1 ha grids.

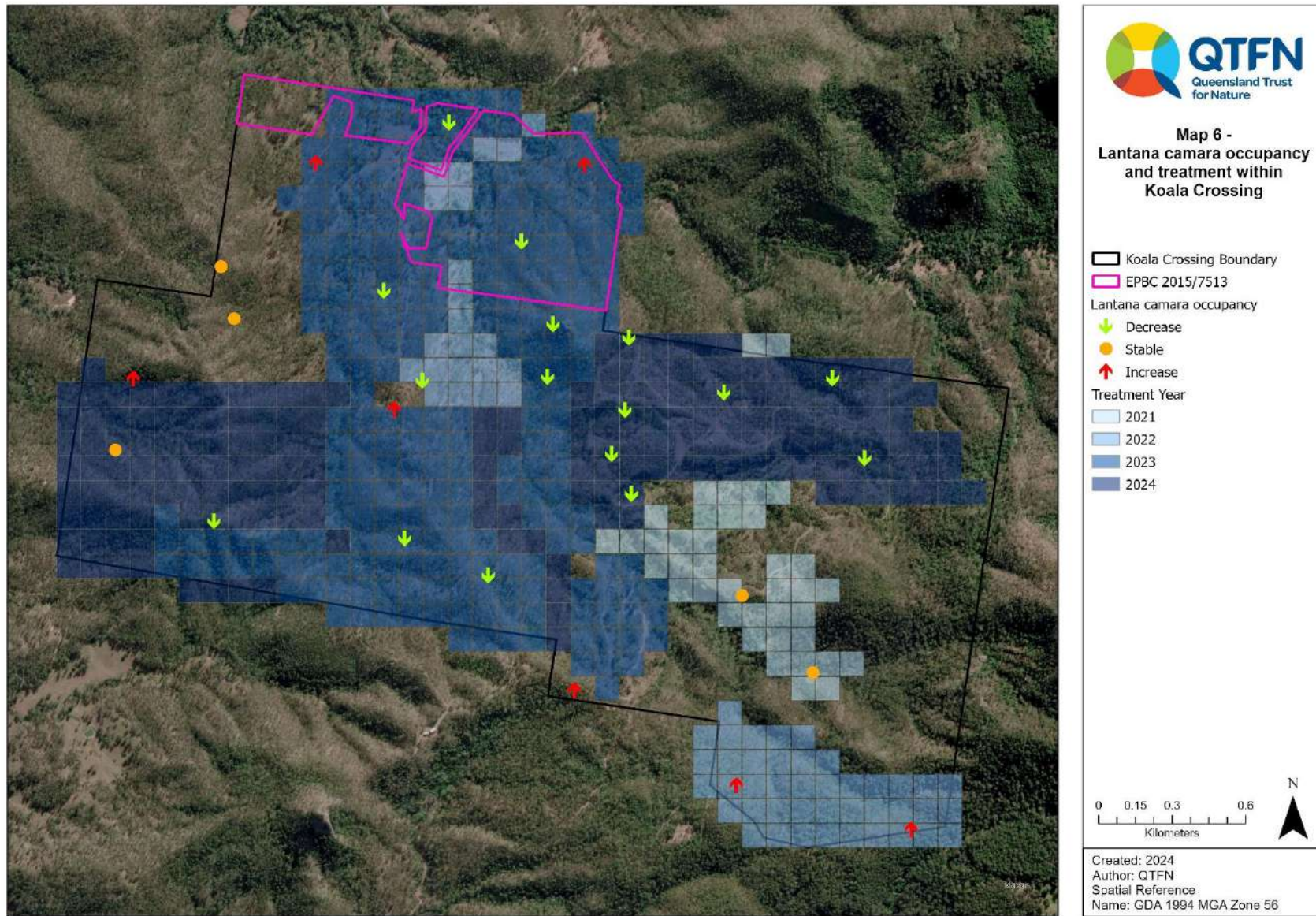
Map 4 – BioCondition plots and weed transects within the offset area



Map 5 – BioCondition plots within Koala Crossing



Map 6 – *Lantana camara* occupancy and treatment within Koala Crossing



3.3 HABITAT CONNECTIVITY

Relevant actions	Reporting requirement
<ul style="list-style-type: none"> • Vegetation clearing will not be undertaken within the offset area under any circumstances, except where necessary. • Firebreaks and fire control lines to be inspected at a minimum quarterly frequency or after major storm events. • For full OAMP conditions for habitat connectivity, see Appendix 5. 	<ul style="list-style-type: none"> • The location, extent and associated purpose for any vegetation clearing undertaken within the offset area will be detailed within the annual Offset Area Assessment Report. • Any change to site connectivity is to be detailed within the annual Offset Area Assessment Report.

Habitat connectivity is the connectedness of habitat patches, which is necessary to allow a koala to move from one habitat patch to another without a barrier (Youngentob, Marsh, & Skewes, 2021).

i. Monitoring in this period

Firebreak inspection has been undertaken monthly during this reporting period. Vegetation clearing within the offset area was not undertaken, nor was there a change to site connectivity.

Management actions

Continue to follow the OAMP.

3.4 THREAT TO KOALA FROM DOGS, FOXES AND FERAL CATS

Relevant actions	Reporting requirement
<ul style="list-style-type: none"> Abundance surveys for predators to be undertaken bi-annually by a suitably qualified person Implement an offset area wide predator control program. The control program and techniques (trapping, baiting, shooting) will be informed based on the results of the abundance survey. Presence/absence surveys for predators are to be undertaken each two months by the landholder. Opportunistic monitoring of and koala/predator interactions in the form of injured and/or koala mortality records. For full OAMP conditions for threats to koala from wild dogs, foxes and feral cats, see Appendix 6 and Appendix 7. 	<ul style="list-style-type: none"> Results of all presence/absence surveys will be reported upon on an annual basis as a component on the Annual Offset Areas Assessment Report. All records of koala injury or death resulting from a dog attack are to be reported within the annual Offset Areas Assessment Report.

Predation by wild dogs (*Canis lupus*), feral cats (*Felis catus*) and foxes (*Vulpes vulpes*) poses a significant threat to koalas (Youngentob, Marsh, & Skewes, 2021). Monitoring and management of the feral predators is an essential part of the management plan.

i. Monitoring in this period

Monitoring was conducted using remote sensing wildlife cameras and opportunistic scat collections. This report includes data from summer 2023 through to winter 2024.

Eleven camera trapping stations were deployed across the site (Map 7), with two stations (camera A and F) located within the offset area. See Section 3.1 for the camera trapping methodology.

ii. Results and Management Outcomes

Property wide trends

Wild dogs, feral cats and foxes were recorded within the Koala Crossing property.

Across the property, relative abundance for wild dogs increased in 2023 then declined in 2024. The occupancy of wild dogs decreased in winter 2024 from summer 2023. Relative abundance and occupancy of foxes decreased from the peak in winter 2023, then increased in winter 2024, while the occupancy remained stable in winter 2024. Relative abundance of foxes seems to decrease when the relative of abundance of wild dogs is higher. Wild dogs are apex predators and can suppress mesopredators (foxes and feral cats) (Hunter & Letnic, 2022). Feral cats were detected in 2024, after not being recorded on camera traps for six years. All predators have been fluctuating across seasons (Figure 2).

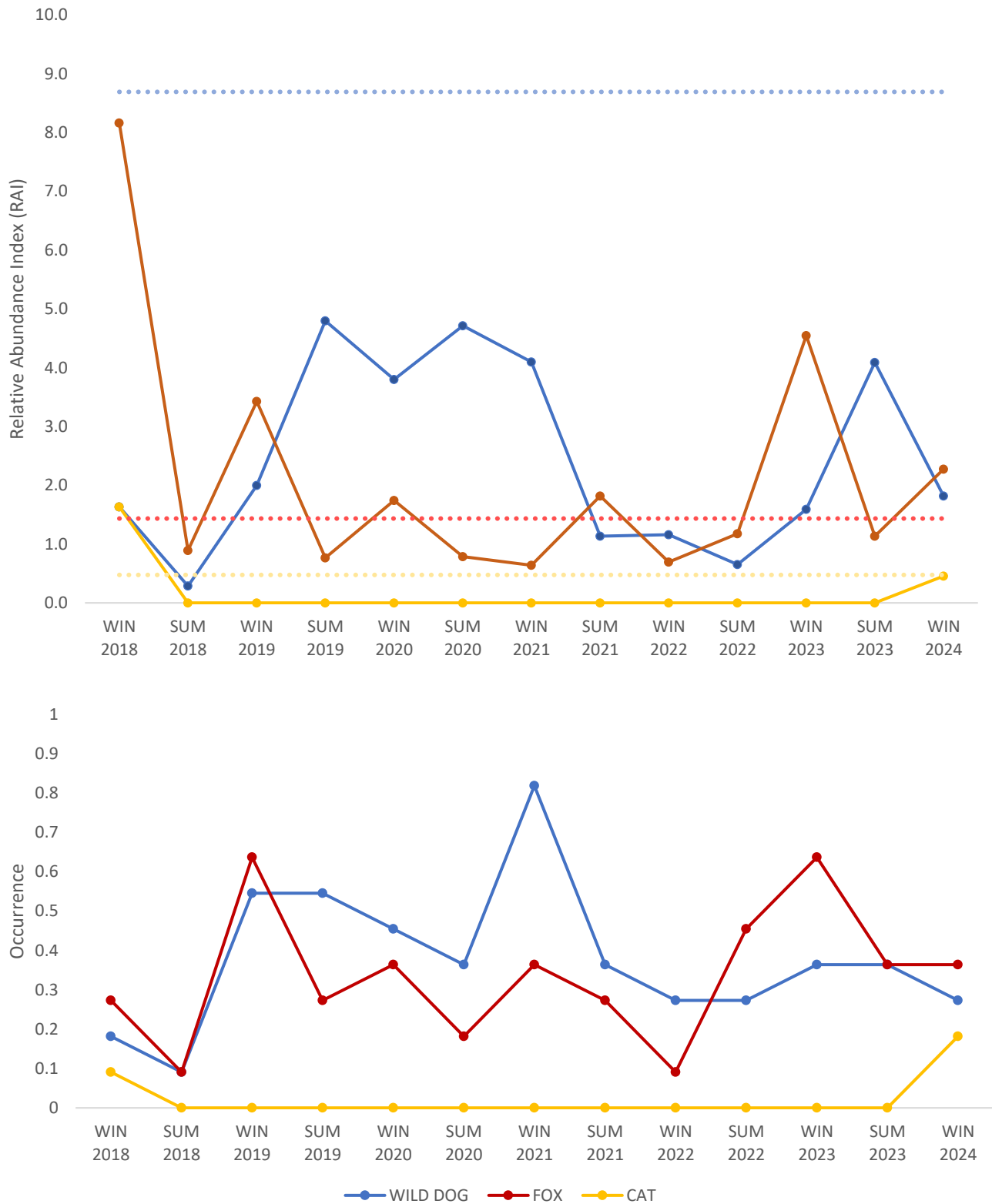


Figure 2 - Relative abundance index (top) and occupancy (bottom) of wild dogs (blue), foxes (red) and feral cats (yellow) within Koala Crossing. Confidence limit thresholds to show deviations from the baseline for each feral animal are illustrated by the dashed lines.

Offset specific trends

Wild dogs and foxes were captured on both cameras during the reporting period (Table 4) (Appendix 8). Feral cats have not been recorded on these camera traps during the life of the offset thus far.

Camera F is located along a creek line which is frequently used by foxes and wild dogs for dispersal across the landscape with sightings in both summer and winter.

Table 4 – Number of camera traps feral predators were detected on for each trapping period

Season	Dogs	Foxes	Cats
Winter 2018	1	1	0
Summer 2018	1	1	0
Winter 2019	2	2	0
Summer 2019	1	1	0
Winter 2020	1	2	0
Summer 2020	2	0	0
Winter 2021	2	1	0
Summer 2021	0	0	0
Winter 2022	1	0	0
Summer 2022	0	2	0
Winter 2023	0	2	0
Summer 2023	1	0	0
Winter 2024	0	2	0

Analysis of predator scat

Predator scats were not recorded in the offset area or Koala Crossing property during the reporting period. However, predator scats have been recorded historically across Koala Crossing (Map 7). To date, analysis of predator scat has revealed no evidence of koalas in the diet of any feral predators on Koala Crossing.

Other observations

Feral pigs (*Sus scrofa*) were observed at camera F in the offset area during the reporting period.

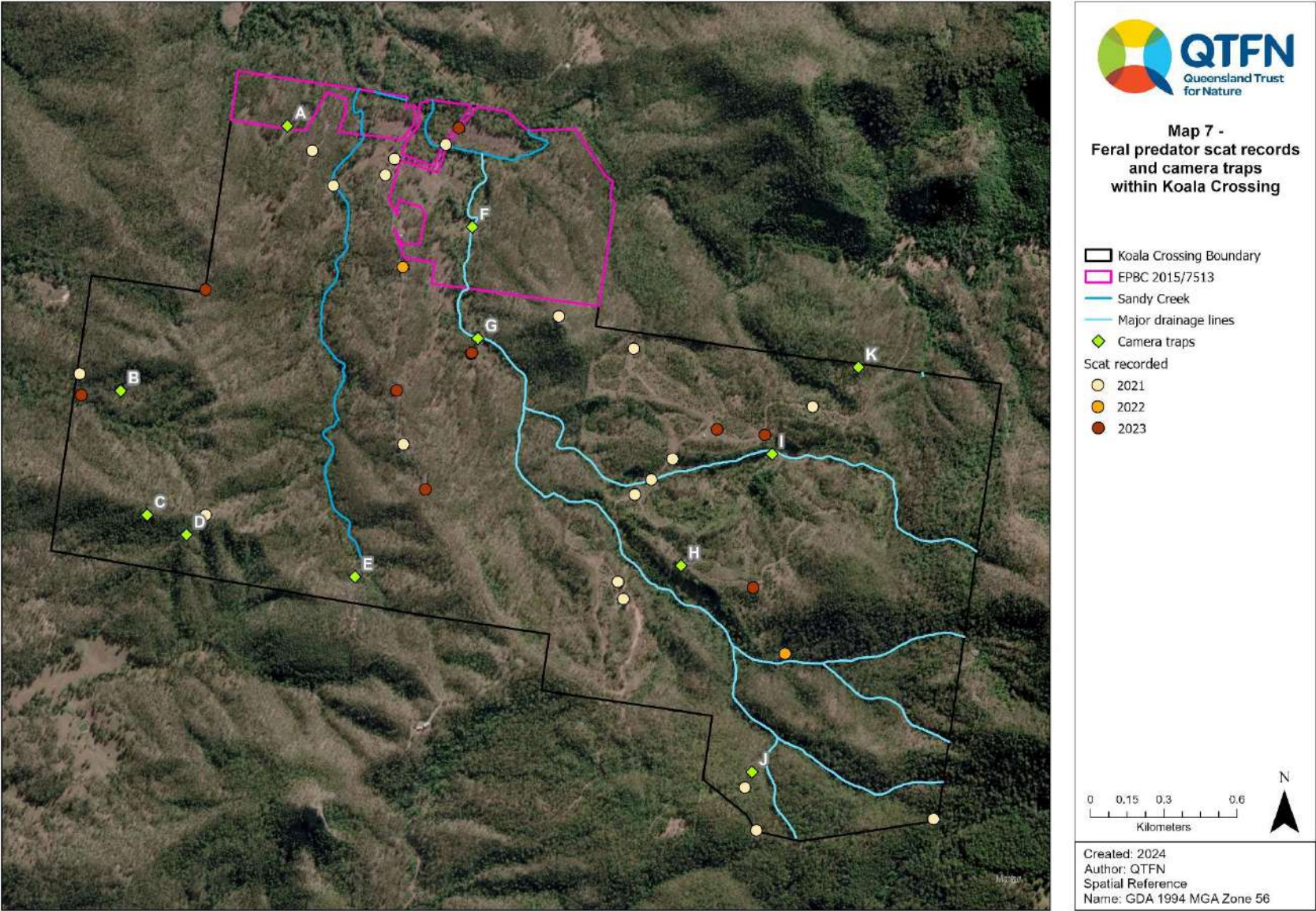
A high abundance of red-necked wallabies (*Macropus rufogriseus*) and swamp wallabies (*Wallabia bicolor*) were observed. Additionally, small-medium mammals were observed including long-nosed bandicoots (*Perameles nasuta*), northern brown bandicoots (*Isodon macrourus*) and short-beaked echidna (*Tachyglossus aculeatus*).

Management actions

A pest management contractor is currently engaged with a primary focus on reducing the number of wild dogs, foxes and feral cats. Biannual monitoring using camera traps will continue and will inform the pest management contractor of which areas to target. During the reporting period, two foxes were dispatched within Koala Crossing.

It should be noted that controlling feral predators on sites without exclusion fencing can result in periodic increases in predator numbers from the surrounding area despite control measures.

Map 7 – Feral predator scat records and camera traps within Koala Crossing



3.5 THREAT TO KOALA FROM VEHICLE STRIKE

Relevant actions	Reporting requirement
<ul style="list-style-type: none"> Record any koala injury/mortality on roads within offset area of Flinders Road. Report injuries/deaths to LGA. For full OAMP conditions for threat to koala from vehicle strike, see Appendix 9. 	<ul style="list-style-type: none"> Report any koala injuries/deaths to Local Government authority and relevant State Government department. Incident to be recorded in annual Offset Area Assessment Report.

There were no vehicle strike incidents within the offset area or the entire Koala Crossing property.

3.6 THREAT TO KOALA VIA BARRIERS TO DISPERSAL

Relevant actions	Reporting requirement
<ul style="list-style-type: none"> Vegetation clearing will not be undertaken within the offset area under any circumstances. Ongoing retention and recruitment of koala food trees. For full OAMP conditions for threat to koala via barriers to dispersal, see Appendix 10. 	<ul style="list-style-type: none"> The location, extent and associated purpose for any vegetation clearing or damage through natural disaster within the offset area will be detailed within the annual Offset Area Assessment Report.

Vegetation clearing (excluding weeds) was not undertaken in any part of the offset area. There was no damage associated with a natural disaster within any part of the offset area.

Retention and recruitment of koala food trees is discussed in Section 3.2.

3.7 THREAT TO KOALA HABITAT THROUGH HYDROLOGICAL CHANGE

Relevant actions	Reporting requirement
<ul style="list-style-type: none"> If any actions are proposed that may significantly impact the current (at time of offset area being legally secured) hydrological regime and therefore potentially impact koala habitat within the offset area, then actions are required. For full OAMP conditions for threat to koala habitat through hydrological change, see Appendix 11. 	<ul style="list-style-type: none"> Where approved hydrological change has occurred within the offset area, monitoring of the impact to the site's vegetation communities will be a component of an annual site assessment.

There have been no hydrological changes made within the offset area or the entire Koala Crossing property.

3.8 THREAT TO KOALA THROUGH FIRE

Relevant actions	Reporting requirement
<ul style="list-style-type: none"> • Install firebreaks and fire trails. Inspect and undertake maintenance in compliance with OABMP. • Prescribed burning will be undertaken in consultation with, and under the guidance of the Queensland Rural Fire Brigade. • For full OAMP conditions for threat to koala through fire, see Appendix 12. 	<ul style="list-style-type: none"> • To be informed by an Offset Area Bushfire Management Plan. • Monitoring results and maintenance log will be detailed within the annual Offset Area Assessment Report.

The Koala Crossing Fire Management Plan (Heathwood, Braun, & Campbell, 2023) divides the property into Fire Management Zones, which includes Land Management Zones, Exclusion Zones and Asset Protection Zones. Within the Land Management Zones, the landscape is broken up into subzones (Fire Management Areas [FMA]) according to practicable containment lines. The Fire Management Plan details burning intervals recommended for these FMAs (Heathwood, Braun, & Campbell, 2023). The offset area is located in FMA 2, 3 and 5 (Map 8).

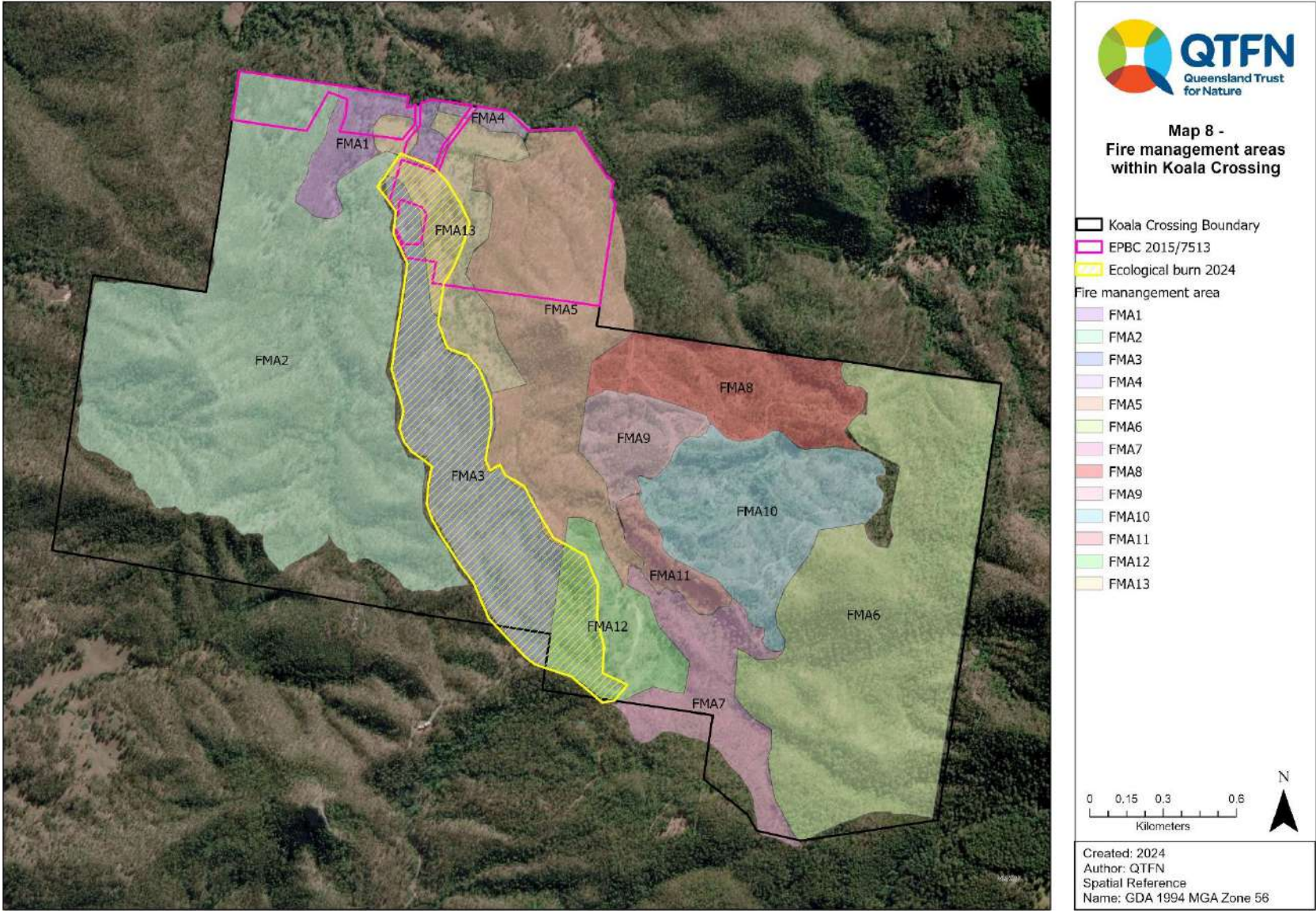
i. Results and Management Outcomes

One low to moderate intensity burn occurred between 7 and 9 June 2024 at Koala Crossing during this reporting period. The 61 ha controlled ecological burn conducted by Fireland Consultancy in FMA 3, 12 and 13 was used to reduce fuel loads and control *Lantana* species. Part of the burn was located inside the offset area and was implemented successfully (Photo 2).



Photo 2 – Ecological burn

Map 8 – Fire management areas within Koala Crossing



3.9 THREAT TO KOALA AND KOALA HABITAT FROM DISEASE AND PATHOGENS

Relevant actions	Reporting requirement
<ul style="list-style-type: none"> To reduce the risk of introducing Chlamydia and Koala retrovirus into the resident population; uncontrolled translocation of koala is not permitted within the offset area. Enforce biosecurity procedures for all persons and vehicles that may carry vegetation pathogens known to affect koala food and shelter trees. For full OAMP conditions for threat to koala from disease and pathogens, see Appendix 13. 	<ul style="list-style-type: none"> Incidence of koalas exhibiting disease to be recorded if encountered during any monitoring events within the offset area. Confirmation of translocation activity within the offset area is to be included within annual Offset Area Assessment Reports.

i. Monitoring in this period

The two main diseases of concern for koalas are Chlamydia (*Chlamydia pecorum*) and koala retrovirus (KoRV) (Youngentob, Marsh, & Skewes, 2021). Koala food trees are susceptible to Phytophthora dieback (*Phytophthora cinnamomic*) and myrtle rust (*Austropuccinia psidii*).

The initial baseline survey for koala health in July 2015 indicated no incidence of koala diseases within the population at Koala Crossing. In 2019, Chlamydia was confirmed in at least 16% of the Koala Crossing population and more than 50% of the surrounding population (Ecosure, 2024). Monitoring continues with incidental sightings and monitoring events carried out by QTFN ecologists. No evidence of Phytophthora dieback or myrtle rust was evident within the offset area or throughout Koala Crossing. An ongoing program is in place to continue monitoring the health of the koala population at Koala Crossing.

ii. Results and Management Outcomes

Appendix 14 outlines the protocols for dealing with sick or injured koalas. Due to an individual being observed with chlamydia, which is known to be established in the SEQ population (Robbins, Hanger, Jelocnik, Quigley, & Timms, 2020), further investigation and health assessment of individuals will be conducted on Koala Crossing in 2025 to assess the extent to which disease is influencing koalas on the property.

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APPENDICES

Appendix 1 – Koala occurrence attribute table

Outcome	<p>2.1.1.1A Increase koala density within offset area</p> <p>2.1.1.1B Net gain in koala density within offset area</p> <p>2.1.1.2 Koala occurrence on currently cleared areas</p>
Actions	<p>2.1.2.1A Baseline koala density survey completed June 2015 using Koala Rapid Assessment Method and SAT and line transect surveys (Phillips and Callaghan. 2011; Dique et al. 2003).</p> <p>2.1.2.1B Baseline koala density survey conducted within 12 months of offset area being legally secured using best practice methodologies such as the SAT and line transect surveys (Phillips and Callaghan. 2011; Dique et al. 2003).</p> <p>2.1.2.2 Replicated koala density/occurrence surveys undertaken within the offset area at years 5 and 10 from the date at which the offset is legally secured.</p> <p>2.1.2.3 Koala density surveys to be undertaken by a suitably qualified environmental scientist.</p> <p>2.1.2.4 Legally secure the offset area by way of voluntary declaration under the Vegetation Management Act 1999.</p>
Performance Indicators	<p>2.1.3.1 Baseline koala density/occurrence survey undertaken and documented.</p> <p>2.1.3.2 Koala density/occurrence surveys (years 5 and 10) records an increase in koala density/activity within offset area.</p> <p>2.1.3.3 Offset area is legally secured for conservation purposes.</p>
Monitoring	<p>2.1.4.1 Record opportunistic koala sightings inclusive of scat findings (location and date).</p>
Reporting	<p>2.1.5.1 Incorporate the koala density survey results within the relevant Offset Area Assessment Report (in the year conducted).</p> <p>2.1.5.2 Incorporate opportunistic koala sightings into Offset Area Assessment Reports.</p> <p>2.1.5.3 Submit all Offset Area Assessment Reports to DEE as required.</p> <p>2.1.5.4 Submit all Offset Area Assessment Reports and any records of non-compliance to DEE via email to PostApproval@environment.gov.au</p>
Corrective Action	<p>2.1.5.1 If koala densities are not maintained or are significantly reduced, then an assessment needs to be undertaken by a koala expert in relation to the potential cause/s and remediation actions undertaken where feasible through the implementation of adaptive management.</p>

Appendix 2 – Vegetation composition attribute table

Outcomes	<p>2.2.1.1A Vegetation composition maintains a ‘high’ score value in relation to habitat that is critical to the survival of the koala.</p> <p>2.2.1.1B Self-sustaining vegetation resembling the pre-clearance Regional Ecosystem/s present on the site in the currently cleared areas (4.2 ha) (excluding potential future infrastructure footprints and gazetted roads) is established.</p> <p>2.2.1.2A No significant increase in weed cover for species that could adversely affect the structural composition of vegetation within the offset area in relation to koala habitat value.</p> <p>2.2.1.2B Weed cover impacting koala movement across the site and adversely affecting structural composition of koala habitat (number of koala food and shelter species and their recruitment) is reduced.</p> <p>2.2.1.3 Structure and floristic diversity of canopy vegetation surrounding cleared areas is retained and enhanced.</p> <p>2.2.1.4 Structure and floristic diversity of middle and understorey vegetation surrounding cleared areas is retained and enhanced.</p> <p>2.2.1.5 Preservation and recruitment of koala food and shelter trees.</p> <p>2.2.1.6 Threat of habitat degradation associated with clearing, development and incompatible land uses is permanently removed.</p> <p>2.2.1.7 Domestic livestock excluded from offset area (unless controlled grazing required for fire risk management).</p>
Actions	<p>2.2.2.1 Incorporate offset area into property Bushfire Management Plan within 6 months of the offset area being legally secured.</p> <p>2.2.2.2 Install fire breaks/trails in accordance with the Bushfire Management Plan.</p> <p>2.2.2.3 Retain all vegetation in remnant and mature regrowth areas, except where necessary for the removal of weeds, to establish and maintain fencing around the offset area perimeter, establish and maintain fire breaks/trails as per Bushfire Management Plan, or to reduce or remove health and safety risk to persons and/or infrastructure.</p> <p>2.2.2.4A Monitoring of canopy composition with respect to koala food tree species; adaptive management if required. Monitoring to include representative surveys of all applicable (koala habitat) vegetation communities within the offset area. For example, tertiary-level vegetation surveys in accordance with Neldner et.al. (2012).</p> <p>2.2.2.4B Undertake baseline Tertiary Vegetation Condition Assessments, including photo point monitoring.</p> <p>2.2.2.5 Implement a revegetation program in cleared areas using best practice techniques with tree and shrub species representative of the pre-clearance Regional Ecosystem including koala food and shelter trees (see Appendix C for proposed species list).</p> <p>2.2.2.6 Implement a weed management plan, with a particular focus on weeds declared under the <i>Land Protection (Pest and Stock Route Management) Act 2002</i>, as well as weeds with potential to impact on koala movement and structural vegetation composition (mainly <i>Lantana camara</i>).</p> <p>2.2.2.7 Legally secure the offset area by way of voluntary declaration under the <i>Vegetation Management Act 1999</i>.</p> <p>2.2.2.8 Domestic livestock will only be introduced in the event that a fire risk professional (e.g. representative of Queensland Rural Fire Service) and a suitably qualified environmental scientist deem that conditions are not suitable for an ecological burn and that grazing is appropriate to manage a high level of fire risk. Level of risk (and any need to repeat this grazing cycle) is to be re-assessed by the aforementioned professionals following the grazing event.</p>
Performance Indicators	<p>2.2.3.1A Vegetation composition retains structural attributes of forest or woodland and maintains koala food tree species diversity recorded by baseline survey.</p>

	<p>2.2.3.1B A self-sustaining ecosystem is established on the currently cleared areas resembling pre-clearance Regional Ecosystems with koala food and shelter species present targeting a minimum plant survival rate of 80% is required during the establishment phase.</p> <p>2.2.3.2 Livestock are excluded from offset area.</p> <p>2.2.3.3A Weed cover (shrub, tree and vine species) does not exceed baseline levels by more than 10%.</p> <p>2.2.3.3B Declared weed cover is reduced across the property, and weeds are not impacting on the movement of koalas across the site and not negatively impacting on recruitment of koala food and shelter trees.</p> <p>2.2.3.4 Offset area is legally secured as an area of High Conservation Value under section 19F of the <i>Vegetation Management Act 1999</i>.</p>
Monitoring	<p>2.2.4.1A Baseline assessment of koala food tree species richness conducted March 2015 and subsequent monitoring every five years for the life of the offset area.</p> <p>2.2.4.1B Tertiary Vegetation Condition Assessments at least twice in the 10 year management period.</p> <p>2.2.4.2A Baseline assessment of offset area weed infestation levels conducted March 2015.</p> <p>2.2.4.2 Weed surveys undertaken annually (during spring or summer to optimise weed detection).</p> <p>2.2.4.3 Photo monitoring.</p> <p>2.2.4.4 If livestock are kept on the balance of the property, the offset area fencing to be monitored on a monthly basis</p>
Reporting	<p>2.2.5.1 Monitoring results to be recorded in Offset Area Assessment Report.</p> <p>2.2.5.2 Submit all Offset Area Assessment Reports to DEE as required.</p> <p>2.2.5.3 Submit all Offset Area Assessment Reports and any records of non-compliance to DEE via email to PostApproval@environment.gov.au.</p>
Corrective Action	<p>2.2.6.1A Supplementary planting/assisted natural regeneration of koala food trees to be undertaken where koala food tree species diversity is recorded to have declined from baseline levels.</p> <p>2.2.6.1B If tree height and foliar projective cover monitoring indicate tree growth less than performance indicators, implement additional weed control, fertiliser, amelioration or other management actions necessary to stimulate tree growth.</p> <p>2.2.6.2B If weed survey indicates weed cover is not reduced since previous survey, weed control program to be expanded/adapted to improve outcomes.</p> <p>2.2.6.3 If livestock-proof fencing is breached:</p> <ul style="list-style-type: none"> - Within 7 days: Livestock will be removed from offset area and temporary fencing measures put in place to ensure livestock are excluded and permanent fence repairs can be completed; and - Within 28 days: Repairs to fencing undertaken to achieve a koala-friendly livestock-proof standard.
Term	10 years

Appendix 3 – Weed transect photos

2023	2024
Transect 1 – decrease	
	
Lantana occupancy – 67%	Lantana occupancy – 48%
Transect 23 – decrease	
	
Lantana occupancy – 14%	Lantana occupancy – 10%

Transect 27 – increase



May 08, 2023 8:03:30 am

Lantana occupancy – 5%



May 08, 2024 1:37:22 pm AEST

Lantana occupancy – 29%

Appendix 4 – BioCondition scores

		Site-based attributes																								Landscape-scale attributes						BioCondition score			
		Native tree score								Native species richness score								Cover score								Patch size		Connectivity		Context					
Plot	Year	Large trees		Tree canopy height		Canopy recruitment		Woody debris		Tree canopy		Shrub		Grass		Forb		Canopy		Shrub		Grass		Litter		Weed		20	24	20	24	20	24	20	24
BC01	2024	10	10	5	5	5	5	5	5	5	5	2.5	5	5	5	5	5	3.5	3.5	3	5	1	1	3	3	3	3	7	10	2	5	4	4	71.5	77
BC02	2024	15	10	4	5	5	5	3	2	2.5	5	5	2.5	2.5	0	2.5	2.5	3.5	5	5	0	1	1	5	5	0	0	10	10	5	5	5	5	74	63
BC03	2024	10	10	4	5	5	5	3	5	5	5	2.5	2.5	5	5	5	5	5	4	5	3	0	1	5	5	5	5	10	10	4	5	4	4	77.5	79.5
BC04	2024	15	15	5	5	5	5	3	5	5	5	0	5	2.5	2.5	5	2.5	5	5	5	3	1	5	3	5	5	5	10	10	5	5	5	5	79.5	88
BC05	2024	5	5	5	5	5	5	5	5	5	5	5	5	5	2.5	2.5	5	5	5	3	5	1	5	5	5	0	5	7	10	2	5	4	5	64.5	82.5
BC06	2024	0	0	5	5	5	5	5	5	2.5	5	2.5	0	2.5	5	5	5	5	2.5	5	5	1	5	5	3	0	5	7	10	2	5	4	4	56.5	69.5
BC07	2024	5	5	5	3	5	5	3	0	5	5	2.5	5	5	2.5	2.5	2.5	5	2	0	3	5	1	5	5	3	0	7	7	0	5	4	4	62	55
BC08	2024	5	5	5	5	5	5	3	0	5	5	2.5	0	5	2.5	2.5	2.5	2.5	4	3	5	3	1	5	3	5	5	7	10	0	5	4	4	62.5	62
BC09	2024	0	0	5	5	5	5	5	5	2.5	5	2.5	0	2.5	5	5	5	3.5	5	5	5	1	5	5	5	0	5	7	10	0	5	4	5	53	75
BC10	2024	0	0	0	3	5	5	5	5	5	5	0	0	2.5	2.5	0	5	3	2.5	5	0	0	1	5	5	2.5	5	0	7	0	5	4	4	42	55
BC11	2024		0		3		5		2		5		2.5		2.5		2.5		3.5		0		3		3		0		7		5		4		48
BC12	2024		0		5		5		2		5		2.5		5		5		5		3		5		3		5		7		5		4		66.5
BC13	2024		15		5		5		2		5		5		2.5		5		5		5		1		5		3		10		5		4		82.5
BC14	2024		5		5		5		5		5		5		5		5		4		0		1		5		5		10		5		5		75
BC15	2024		5		5		5		5		5		2.5		2.5		0		3.5		5		5		3		0		7		5		4		62.5
BC16	2024		10		5		5		2		5		2.5		5		5		1.5		3		1		5		3		7		5		5		70
BC17	2024		0		3		5		0		5		2.5		2.5		0		3.5		3		0		3		0		7		5		4		43.5
BC18	2024		0		3		5		2		5		2.5		2.5		2.5		2		0		1		3		0		7		5		4		44.5
BC19	2024		0		3		5		5		5		2.5		5		2.5		3.5		5		0		5		0		7		5		4		57.5

BioCondition score changes from 2020 to 2024 are highlighted in the table above: increases are marked in green, decreases in orange, and stable scores in yellow. BC07, BC08 and BC12 are within the offset area. BC11 to BC19 do not have BioCondition scores for 2020 as these plots were newly added in 2024.

Appendix 5 – Habitat connectivity attribute table

Outcomes	<p>2.3.1.1 Maintain contiguous landscapes to allow koalas to establish new territories, facilitate gene flow and respond to environmental changes.</p> <p>2.3.1.2 Achieve good connectivity with the neighbouring offset property also owned by QTFN.</p> <p>2.3.1.3 Contribute to koala movement and dispersal through the Flinders Karawatha corridor.</p>
Actions	<p>2.3.2.1 Retain all vegetation in remnant and mature regrowth areas except where necessary for the removal of weeds, to establish and maintain fencing around the offset area perimeter, establish and maintain fire breaks/trails as per Bushfire Management Plan, or to reduce or remove health and safety risk to person and/or infrastructure.</p> <p>2.3.2.2 Implement a revegetation program in the cleared areas using best practice techniques using tree and shrub species representative of the pre-clearance Regional Ecosystem including koala food and shelter trees (see Appendix C for proposed species list).</p> <p>2.3.2.3 Legally secure the offset area by way of voluntary declaration under the <i>Vegetation Management Act 1999</i>.</p> <p>2.3.2.4 No livestock will be allowed on the offset area.</p> <p>2.3.2.5 The subject property boundary is currently fenced in koala-permeable fencing. Any new or replacement fencing is to be 'fauna-friendly' in accordance with a relevant guideline such as Note G4 – Wildlife Friendly Fencing and Netting (Land for Wildlife Queensland).</p>
Performance indicators	<p>2.3.3.1 Offset area is legally secure as an area of High Conservation Value under section 19F of the <i>Vegetation Management Act 1999</i></p>
Monitoring	<p>2.3.4.1B Monitor for any (illegal) clearing in the area (highly unlikely) or any natural events that might impact on habitat connectivity.</p> <p>2.3.4.2A Firebreaks and fire control lines and fence lines to be inspected at a minimum quarterly frequency or after major storm events.</p> <p>2.3.4.3A Fencing within and adjoining the offset area will be inspected monthly.</p>
Reporting	<p>2.3.5.1 The location, extent and associated purpose for any vegetation clearing undertaken within the offset area will be detailed within the annual Offset Area Assessment Report.</p> <p>2.3.5.2 Submit all Offset Area Assessment Reports to DEE as required.</p> <p>2.3.5.3 Submit all Offset Area Assessment Reports and any records of non-compliance to DEE via email to PostApproval@environment.gov.au</p>
Corrective Action	<p>2.3.6.1A Any fencing within or adjoining the offset area is koala permeable, and any fencing installed or replaced within the offset area is to be fauna-friendly in design as per a relevant guideline such as Wildlife Friendly Fencing Project (2014) or Land for Wildlife (nd).</p> <p>2.3.6.2B Report any suspected illegal clearing to the Queensland Department of Environment and Science.</p>

Appendix 6 – Threat to koala from wild dogs

Outcome	2.4.1.1 Reduction of risk of koala mortality or injury by dog attack within the offset area through reduction in wild dog abundance.
Actions	<p>2.4.2.1A An initial survey to establish a baseline of wild dog abundance within the offset area was conducted for the entire property in June 2015. Subsequent monitoring was conducted in December/January 2015/2016. The survey method used for the initial abundance survey is informed using best practice methodology and applicable guidelines available at the time of survey (e.g. DoE, 2007 and Mitchell and Balogh, 2007).</p> <p>2.4.2.1B Conduct a baseline survey to establish feral animal abundance and location on the property through the use of remote motion-activated cameras and/or identification of scat.</p> <p>2.4.2.2 Baseline predator abundance survey is to be undertaken by a suitably qualified person.</p> <p>2.4.2.3 Offset area wide wild dog control program was undertaken following the monitoring period in June 2015. Where practicable and to increase the effectiveness of a control program the landholder will seek to coordinate control programs with comparable activities being undertaken by neighbouring landholders.</p> <p>2.4.2.4 Post the initial control event, presence/absence surveys for wild dogs to be undertaken each two months by the landholder.</p> <p>2.4.2.5 Post initial control event, abundance surveys for wild dogs to be undertaken bi-annually by suitably qualified person.</p> <p>2.4.2.6 Where post control surveys indicate there has been a recurrence of wild dogs within the offset area, control measures will be actioned using methods (controlled shooting or baiting) determined by a pest control professional in consideration of monitoring results.</p> <p>2.4.2.7 Any injured koala found on the site will be sent to a veterinary clinic/wildlife rescue facility for rehabilitation.</p> <p>2.4.2.8 Installation of appropriate hazard warning signage indicating the offset area is subject to dog control for the purpose of managing the offset site for the benefit of koalas.</p>
Performance Indicators	<p>2.4.3.1A Data collected from the initial control action to indicate the successful reduction of wild dog density (based on control method data e.g. bait takes, kills from shooting).</p> <p>2.4.3.1B Ensure relative abundance index does not increase from baseline.</p> <p>2.4.3.2A No records of feral dog abundance within the site.</p> <p>2.4.3.3 No records of injury and or death to koala relating to dog attacks recorded from within the offset area.</p>
Monitoring	<p>2.4.4.1 Offset area-wide traverse every two months to record the presence/absence of signs of wild dogs (including scats). The monitoring will take place along a set route utilising the existing network of tracks within the offsets area (e.g. fire control lines) to allow for replication of the monitoring events.</p> <p>2.4.4.2 Bi-annual abundance surveys to be undertaken by a suitably qualified professional</p> <p>2.4.4.3 Opportunistic monitoring of koala/dog interactions in the form of injured, koala mortality records.</p>
Reporting	<p>2.4.5.1 Wild dog abundance baseline survey results will be incorporated within the initial annual Offset Area Assessment Report</p> <p>2.4.5.2 Results of all presence/absence surveys will be reported upon on an annual basis, as a component on the Annual Offset Areas Assessment Report.</p> <p>2.4.5.3 All records of koala injury or death resulting from a dog attack are to be reported within the annual Offset Areas Assessment Report</p> <p>2.4.5.4 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of initial baseline survey</p> <p>2.4.5.5 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE via email.</p>
Corrective action	<p>2.4.6.1 Should the efficacy of the initial and ongoing wild dog control measure no result in a reduction of wild dog numbers (based on initial baseline survey), alternative and/or additional control measures will be implemented, and the efficacy evidenced through the ongoing monthly/quarterly monitoring survey results.</p> <p>2.4.6.2 Any incidence of koala injury/mortality resulting from a dog attack will initiate supplementary monitoring and control measures in addition to the scheduled monthly and quarterly monitoring.</p> <p>2.4.6.3 Any required adaptation to wild dog management measures in response to failure to meet the objectives of the OAMP are to be approved by a suitably qualified person.</p>

Appendix 7 – Threat to koala from feral cats and foxes

Outcome	2.5.1.1 Reduction of risk of koala mortality or injury by feral cat or fox attack within the offset area through reduction in feral cat or fox abundance.
Actions	<p>2.5.2.1 Initial survey to establish a baseline of feral cats and fox abundance within the offset area was conducted for the entire property in June 2015. Subsequent monitoring was conducted in December/January 2015/2016. The survey method used for the initial abundance survey is informed using best practice methodology and applicable guidelines available at the time of survey (e.g. DoE, 2007 and Mitchell and Balogh, 2007).</p> <p>2.5.2.2 Offset area wide feral cat or fox control program to be undertaken with the aim of removing all feral cat or foxes from the offset area. The specific control method will be informed by the results of the initial feral cat or fox abundance survey. Where practicable and to increase the effectiveness of a control program the landholder will seek to coordinate control programs with comparable activities being undertaken by neighbouring landholders.</p> <p>2.5.2.4 Post the initial control event, presence/absence surveys for feral cat or foxes to be undertaken each two months.</p> <p>2.5.2.5 Post initial control event, abundance surveys for feral cat or foxes to be undertaken bi-annually by suitably qualified person.</p> <p>2.5.2.6 Where post control surveys indicate there has been a recurrence of feral cat or foxes within the offset area, control measures will be actioned using methods (controlled shooting or baiting) determined by a pest control professional in consideration of monitoring results.</p> <p>2.5.2.7 Any injured koala found on the site will be sent to a veterinary clinic/wildlife rescue facility for rehabilitation.</p> <p>2.5.2.8 Installation of appropriate hazard warning signage indicating the offset area is subject to feral cat or fox control for the purpose of managing the offset site for the benefit of koalas.</p>
Performance Indicators	<p>2.5.3.1 Data collected from the initial control action to indicate the successful reduction of feral cat or fox density (based on control method data e.g. bait takes, kills from shooting)</p> <p>2.5.3.2 No increase of feral cat or fox abundance within the site</p> <p>2.5.3.3 No records of injury and or death to koala relating to feral cat or fox attacks recorded from within the offset area.</p>
Monitoring	<p>2.5.4.1 Offset area-wide traverse every two months to record the presence/absence of signs of feral cat or foxes (including scats). The monitoring will take place along a set route utilising the existing network of tracks within the offsets area (e.g. fire control lines) to allow for replication of the monitoring events.</p> <p>2.5.4.2 Bi-annual abundance surveys to be undertaken by a suitably qualified professional</p> <p>2.5.4.3 Opportunistic monitoring of koala/feral cat or fox interactions in the form of injured, koala mortality records</p>
Reporting	<p>2.5.5.1 Feral cat or fox abundance baseline survey results will be incorporated within the initial annual Offset Area Assessment Report.</p> <p>2.5.5.2 Results of all presence/absence surveys will be reported upon on an annual basis, as a component on the Annual Offset Areas Assessment Report.</p> <p>2.5.5.3 All records of koala injury or death resulting from a feral cat or fox attack are to be reported within the annual Offset Areas Assessment Report.</p> <p>2.5.5.4 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of initial baseline survey</p> <p>2.5.5.5 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE (DCCEE) via email.</p>
Corrective action	<p>2.5.6.1 Should the efficacy of the initial and ongoing feral cat or fox control measure no result in a reduction of feral cat or fox numbers (based on initial baseline survey), alternative and/or additional control measures will be implemented, and the efficacy evidenced through the ongoing monthly/quarterly monitoring survey results.</p> <p>2.5.6.2 Any incidence of koala injury/mortality resulting from a feral cat or fox attack will initiate supplementary monitoring and control measures in addition to the scheduled monthly and quarterly monitoring.</p>

2.5.6.3 Any required adaptation to feral cat or fox management measures in response to failure to meet the objectives of the OAMP are to be approved by a suitably qualified person.

Appendix 8 – Feral predator images from camera traps

Wild dog (<i>Canis lupus</i>)	
	
Summer 2023	Winter 2024
Fox (<i>Vulpes vulpes</i>)	
	
Summer 2023	Winter 2024

Appendix 9 – Threat to koala from vehicle strike attribute table

Outcome	2.6.1.1 Contribute to the reduction of risk of injury or death to koala in relation to vehicle strike both within the offset area and on adjacent roads
Actions	2.6.2.1 Signs were installed on the property boundary adjacent to unnamed public road that bisects offset area to alert traffic of the koala offset area and the presence of koalas in the local area. 2.6.2.2 Signs were installed on the property boundary adjacent to the unnamed public road along the frontage to Lot 89 RP892014 to alert east bound traffic of the presence of koalas in the local area. 2.6.2.3 Signs were installed on the property boundary adjacent to Mount Flinders Road along the frontage to Lot 86 RP892014 to alert west-bound traffic of the presence of koalas in the local area. 2.6.2.4 Implementation of a slow speed requirement (40 km/h) for vehicles traversing the offset area. 2.6.2.5 Installation of slow speed signage at the main entry points to the offset area.
Performance Indicators	2.6.3.1 No koala mortalities from vehicle strike within the offset area.
Monitoring	2.6.4.1 Any observed koala injury/mortality on roads/tracks within the offset area or roads that front Lots 86, 87, 88 or 89 RP892014 to be recorded
Reporting	2.6.5.1 Incident to be reported to: Local Government authority (e.g. currently Scenic Rim Regional Council) Relevant State Government department (e.g. currently the Department of the Environment, Tourism, Science and Innovation (DETSI)) 2.6.5.2 Incident to be recorded in annual Offset Area Assessment Report. 2.6.5.3 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of the initial baseline survey. 2.6.5.4 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE (DCCEEW) via email.
Corrective Action	2.6.6.1 Injured animals to be transported to a vet or suitably qualified and experienced wildlife carer as soon as possible. 2.6.6.2 Capture and method of transport for injured animals will be in accordance with accepted best practice principles at time of incident: Relevant local or state government websites. Non-profit koala organisations.

Appendix 10 – Threat to koala via barriers to dispersal attribute table

Outcomes	<p>2.7.1.1 Maintain and improve contiguous landscapes to allow koalas to establish new territories, facilitate gene flow and respond to environmental changes.</p> <p>2.7.1.2 Retain and enhance the structure and floristic diversity of canopy vegetation.</p> <p>2.7.1.3 Retain and enhance the structure and floristic diversity of middle and understorey vegetation.</p> <p>2.7.1.4 Ongoing retention and recruitment of koala food trees.</p> <p>2.7.1.5 Permanently remove existing threat of habitat degradation associated with clearing, development or other incompatible land uses.</p> <p>2.7.1.6 Contribute to koala movement and dispersal through the Flinders Karawatha through the establishment of a protected habitat corridor (minimum 700 m width).</p>
Actions	<p>2.7.2.1 To remove the risk of habitat degradation associated with clearing, development or other incompatible land uses, the entire 161.11 ha offset area will be legally secured as an area of High Conservation Value under section 19F of the vegetation management act 1999.</p> <p>2.7.2.2 Given that the subject property boundary is currently fenced in koala permeable fencing, livestock will be excluded from the offset area through at least one of the following mechanisms: Livestock will not be kept within the balance areas of Lots 87 or 88 RP892014 Koala friendly fencing will be erected along the northern boundary of the offset area to exclude livestock grazing outside of the offset area yet within the subject property in accordance with a relevant guideline.</p> <p>2.7.2.3 Domestic livestock will only be introduced in the event that a fire risk professional (e.g. representative of Qld Rural Fire Service) and a suitably qualified environmental scientist deem that conditions are not suitable for an ecological burn and that grazing is appropriate to manage a high level of fire risk (and any need to repeat this grazing cycle) is to be re-assessed by the aforementioned professionals following the grazing event.</p> <p>2.7.2.4 Any fencing installed or replaced within the offset area is to be fauna-friendly in design as per a relevant guideline.</p> <p>2.7.2.5 Vegetation clearing will not be undertaken within the offset area under any circumstances except the following: Where necessary for the removal of weeds To establish and maintain fencing around the boundary of the offset area. To establish and maintain firebreaks and fire trails in accordance with an Offset Area Bushfire Management Plan that has been prepared by a suitably qualified professional. To remove or reduce imminent risk of serious personal injury or damage to infrastructure posed by the vegetation and only to the extent necessary to mitigate the risk</p>
Performance indicators	<p>2.7.3.1 Offset area is legally secured as an area of High Conservation Value under section 19F of the Vegetation Management Act 1999.</p> <p>2.7.3.2B A self-sustaining ecosystem is established on the currently cleared areas resembling pre-clearing Regional Ecosystem with koala food and shelter species present. During the establishment phase a minimum plant survival rate of 85% is required.</p> <p>2.7.3.3B Average canopy tree height in cleared areas exceeds one metre at end of year one, two metres at end of year two and four metres by end of year four.</p> <p>2.7.3.4B Declared weed cover is reduced across the property, and weeds are not impacting on the movement of koalas across the site and not negatively impacting on recruitment of koala food and shelter trees.</p>
Monitoring	<p>2.7.4.1 If livestock are kept on the balance of the property, offset area fencing to be monitored on a monthly basis.</p> <p>2.7.4.2 Firebreaks and fire control lines to be inspected at a minimum quarterly frequency and after major storm events.</p>
Reporting	<p>2.7.5.1 The location, extent and associated purpose for any vegetation clearing or damage through natural disaster within the offset area will be detailed within the annual Offset Area Assessment Report.</p> <p>2.7.5.2 All annual Offset Area Assessment Reports are to be submitted to DoE (DCCEEW) on an annual basis within three months of the anniversary of the completion of the initial baseline survey.</p> <p>2.7.5.3 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE (DCCEEW) via email.</p>

<p>Corrective Action</p>	<p>2.7.6.1 If livestock are kept on the balance of the property and livestock proof fencing is breached: Within 7 days: livestock will be removed from offset area and temporary fencing measures put in place to ensure livestock are excluded until permanent fence repairs can be completed. Within 28 days: Repairs to fencing undertaken to achieve koala-friendly livestock-proof standard.</p> <p>2.7.6.2B If survival counts indicate less than 85% survival, replanting and/or in-fill planting to be carried out.</p> <p>2.7.6.3B If tree height and foliar projective cover monitoring indicate tree growth less than performance indicators, implement additional weed control, fertiliser, amelioration or other management actions necessary to stimulate tree growth.</p> <p>2.7.6.4B If weed surveys indicate weed cover is not reduced since previous survey, weed control program to be expanded/adapted to improve outcomes.</p>
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Appendix 11 – Threat to koala habitat through hydrological change attribute table

Outcome	2.8.1.1 To ensure the koala habitat within the offset area is maintained and the potential carrying capacity of the area is not reduced due to anthropogenic hydrological change
Actions	2.8.2.1 If any actions are proposed that may significantly impact the current (at time of offset area being legally secured) hydrological regime and therefore potentially impact koala habitat within the offset area then the following actions will be required: Presentation of proposed hydrological change to DoE, detailing the potential impact koala habitat within the offset area. This will include specialist reports detailing the nature of the hydrological change and the expected impact to the offset area’s vegetation communities. Only DoE (DCCEEW) approved hydrological change will be permitted within the offset area
Performance Indicators	2.8.3.1 The overall performance indicator resulting from the stated actions will be no significant impact to koala habitat as a result of hydrological change within the site
Monitoring	2.8.4.1 Where DoE (DCCEEW) approved hydrological change has occurred within the offset area, monitoring of the impact to the sites, vegetation communities will be a component of annual site assessment
Reporting	2.8.5.1 The annual Offset Area Assessment Report will present details relating to requested hydrological change requests made to DoE (DCCEEW) 2.8.5.2 Assessment of vegetation in relation to potential impacts resulting from hydrological change will be presented within the Annual Offset Area Assessment Report
Corrective Action	2.8.6.1 Only DoE (DCCEEW) -approved actions which could potentially significantly impact the hydrological status quo within the offset area are permissible. Should it be determined that there is an impact to koala habitat from hydrological change (as evidenced through annual vegetation assessments) then corrective actions, as determined by a suitably qualified professional within affected areas will occur.

Appendix 12 – Threat to koala through fire attribute table

Outcomes	<p>2.9.1.1 Minimise the risk of high intensity fire within the offset area.</p> <p>2.9.1.2 Minimise the risk of koala mortality within the offset area due to prescribed burning.</p>
Actions	<p>2.9.2.1 A suitably qualified professional will prepare an Offset Area Bushfire Management Plan, detailing: current vegetation condition and fire risk, locations of current and required firebreaks and fire control lines, current fuel loads, recommended actions and timeframes for maintenance of bushfire risk within the context of the adapted Regional Ecosystem Description Database guidelines (refer below) and biodiversity outcomes sought for the offset area.</p> <p>2.9.2.2 With the exception of prescribed burning, which will only be undertaken for the purposes of biodiversity enhancement, the offset area is to be managed to avoid the occurrence of fire by:</p> <p>Maintaining fire control lines relative to the offset area; and Co-locating fire control lines with existing tracks and fence lines on the property where possible</p> <p>2.9.2.3 Existing fencing, firebreaks and fire control lines are to be kept clear of encroaching vegetation to a width as defined by the Offset Area Bushfire Management Plan and in accordance with relevant legislation (e.g. Sustainable Planning Act 2009).</p> <p>2.9.2.4 Vegetation within the offset area will be managed in accordance with the following specifications, which are adapted from the Queensland Herbarium Regional Ecosystem Description Database Fire Management Guidelines for the two vegetation types that occur within the offset area (RE 12.9-10.7 and RE 12.8.24)</p> <p>SEASON: Summer to winter INTENSITY: Low to moderate INTERVAL: 4-25 years STRATEGY: 40-60% mosaic burn. Burn with soil moisture and with a spot ignition strategy so that a patchwork of burn/unburn country is achieved. ISSUES: The fire regime will maintain a mosaic of grassy and shrubby understoreys. Ground litter and fallen timber habitats will be maintained by burning only with sufficient soil moisture. Burning will produce fine scale mosaics of unburnt areas. Variability in season and fire intensity will occur, as well as spot ignition in cooler or moister periods to encourage mosaics.</p> <p>2.9.2.5 The following parameters will be adhered to throughout the planning and implementation of any prescribed burning:</p> <p>Undertake pre-burn survey to identify areas of high koala activity; No prescribed burning will be undertaken when female koalas are likely to be carrying dependent young. Prescribed burning will only be carried out during appropriate weather conditions (e.g. low temperature, low wind, high soil moisture). Post-fire practices will be implemented to mitigate the risk of uncontrolled fire damage (e.g. extinguishing burning of large trees). Minimise the extent of burning so that the risk of injury or mortality to koalas is reduced, the risk of canopy scorch is lowered, whilst other biodiversity benefits to other species are achieved.</p> <p>2.9.2.6 Prescribed burning will be undertaken in consultation with, and under the guidance of the Queensland Rural Fire Brigade.</p> <p>2.9.2.7 Domestic livestock will only be introduced in the event that a fire risk professional and environmental scientist deems that conditions are not suitable for an ecological burn. In this event, a maximum of 12 head of domestic livestock may be introduced for no more than 3 consecutive weeks.</p>
Performance Indicators	<p>2.9.3.1 Fuel levels and burning regime maintained in accordance with Offset Area Bushfire Management Plan.</p> <p>2.9.3.2B Vegetation not negatively affected by fire regime.</p>
Reporting	<p>2.9.4.1 Offset Area Bushfire Management Plan will be prepared within 6 months of the offset area being legally secured.</p> <p>2.9.4.2A Monitoring results and maintenance log will be detailed within the annual Offset Area Assessment Report.</p>

	<p>2.9.4.2B Report on prescribed burn results (area covered, any potential negative impact, intensity of burns, learnings) and report any high intensity (wildfire) to the relevant authorities and report on any impact on the offset area.</p> <p>2.9.4.3 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of the initial baseline survey.</p> <p>2.9.4.4 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE (DCCEEW) via email</p>
<p>Corrective action</p>	<p>2.9.5.1A If a wildfire occurs, the following actions will be taken by the landowner to remedy the situation:</p> <p>Inspect the fencing, undertake any repairs required to ensure livestock-proof standard.</p> <p>Inspect fire control lines, undertake maintenance required to achieve compliance with the Offset Area Bushfire Management Plan.</p> <p>Remove all livestock from the offset area within 7 days of commencing remedial action.</p> <p>Engage suitably qualified professional to assess offset area and update Offset Area Bushfire Management Plan</p> <p>2.9.5.1B If a wildfire occurs in the area, the following actions will be taken by the landowner:</p> <p>Activate Bushfire Management Plan Emergency Response.</p> <p>Stay informed through the Rural Fire Service.</p> <p>Be prepared to engage in fire control.</p>

Appendix 13 – Threat to koala and habitat from disease attribute table

Outcome	<p>2.10.1.1 Reduce risk of the spread of koala and vegetation diseases within the offset area and adjacent areas of koala habitat.</p> <p>2.10.1.2 Third party contractors do not enter the site carrying pathogens.</p>
Actions	<p>2.10.2.1 Baseline offset area condition survey is to include assessment for signs of <i>Phytophthora cinnamomi</i> and Myrtle Rust were undertaken in March 2015 with no evidence of either disease.</p> <p>2.10.2.2 To reduce the risk of introducing Chlamydia and Koala retrovirus into the resident population; uncontrolled translocation of koala is not permitted within the offset area.</p> <p>2.10.2.3 Vegetation management activities which include tree lopping/felling, weed removal, tree planting (including nursery suppliers) are deemed to be high risk in the context of introducing pathogens that may potentially impact koala habitat. As such, any person engaged to undertake these activities must satisfy the landholder that they have undertaken all reasonable steps to prevent the introduction of pathogen/disease to the site (e.g. vehicle equipment washdown prior to site entry)</p> <p>2.10.2.4B Enforce biosecurity procedures for all persons and vehicles that may carry vegetation pathogens known to affect koala food and shelter trees.</p> <p>2.10.2.5B Monitor the neighbouring habitat in order to identify disease occurrence.</p> <p>2.10.2.6B Implement measures such as myrtle rust control in revegetation stock. Certification of nursery, inspection of planting stock, quarantine/destruction of contaminated material, sterilisation of planting equipment and vehicles/wheel washes.</p>
Performance Indicators	<p>2.10.3.1 In the event that regulator approved translocation of koala is proposed on the site the animal is to be assessed by a veterinarian prior to introduction.</p> <p>2.10.3.2 Incidence of koala feed trees exhibiting disease to be recorded if encountered during any monitoring events within the offset area.</p>
Monitoring	<p>2.10.4.1 Incidence of koalas exhibiting disease to be recorded if encountered during any monitoring events within the offset area.</p> <p>2.10.4.2B Monitor the neighbouring habitat in order to identify disease occurrence at least once per annum.</p>
Reporting	<p>2.10.4.1 Baseline data concerning observations around koala and koala habitat diseases and pathogens is to be documented within initial annual Offset Area Assessment Report</p> <p>2.10.4.2 Confirmation of translocation activity within the offset area is to be included within annual Offset Area Assessment Reports.</p> <p>2.10.4.3 Incidence of koalas exhibiting symptoms of disease to be reported within annual Offset Area Assessment Report.</p> <p>2.10.4.4 All annual Offset Area Assessment Reports are to be submitted to DoE on an annual basis within three months of the anniversary of the completion of the initial baseline survey.</p> <p>2.10.4.5 All annual Offset Area Assessment Reports and any records of non-compliance are to be submitted to DoE (DCCEEW) via email.</p>
Corrective action	<p>2.10.5.1 Should there be an increase in trees exhibiting disease symptoms and/or evidence of vegetation dieback (as noted during annual offset area assessments) the following corrective actions will take place:</p> <p>Review of the efficacy of current biosecurity measures</p> <p>Review of plant stock/management services suppliers should it be suspected plant pathogens have been introduced via external sources.</p>

Appendix 14 – Protocol for sick or injured koalas

KOALA MANAGEMENT AND RESCUE PROTOCOL QTFN-KC-010115

If injured or orphaned koalas are found, note its condition and location and contact the following emergency phone number:

- Ipswich Koala Protection Society (IKPS) operate two 24/7 ambulances
- RUTH LEWIS - 0419 760 127/ 5464 6274.

IKPS is licenced with EHP to care for injured and orphaned wildlife, specialising in koala rescue and rehabilitation. They have appropriate facilities and members who are appropriately skilled and have access to reliable sources of a variety of recognised koala food tree species and an ability to collect it.

Other wildlife emergency numbers:

- RSPCA Qld on 1300 ANIMAL, 1300 264 625. RSPCA will usually refer calls to IKPS.
- Australia Zoo Wildlife Hospital 1300 369 652. Based on the Sunshine Coast.

SYMPTOMS OF SICK OR INJURED KOALAS

Puffy or inflamed eyes, which may have a crust or a weepy discharge;

- Dribbling saliva from the mouth;
- Fur that appears constantly wet or matted;
- A dirty tail with brown staining;
- Weakness or unusual behaviour;
- Remaining in the same tree for more than a few days;
- Sitting on the ground or very low down in a tree and not moving when approached. (This may indicate that the animal is too weak to climb);
- Not using all four limbs normally while walking or climbing;
- Very skinny and emaciated appearance;
- Signs of trauma such as cuts or blood on fur.

Signs of a dog attack could be wet, matted fur from the dog's saliva, and bleeding. Because koalas have very little fat under their skin, their internal organs can be easily punctured by the sharp teeth of a dog even though there may be very little damage to the skin surface, so it is very important that the animal is assessed by a vet or carer if a koala is found that is suspected to have been the victim of a dog attack.

PROTOCOL FOR ROAD INJURIES OR DOG ATTACKS

Follow the instructions below for road injuries in handling sick or orphaned koalas or koalas which have been attacked by dogs or injured in some other way. However, unless the koala is in immediate danger, it is better to leave it to the experts to catch it if they think it necessary.

For road injuries:

- Pull off the road safely. If possible, phone the IKPS for instructions.
- Make sure it is safe before you go onto the road to attend to the animal. Stop any traffic if necessary.
- Approach the animal carefully from behind.
- Place a sack, blanket, towel or box over the koala, enclosing its arms and head. Remember, the koala is frightened and has very sharp claws, so be careful. Injured or orphaned animals need immediate dark, warmth

and quiet. They may never have been touched by humans and any stress can cause further injury and death from shock. Also, you may be injured.

- Move the animal to a safe place away from any traffic.
- Handle the koala as little as possible and keep the environment quiet. Keep it contained until help arrives or you get it to a Vet or Carer.
- Keep people and dogs away from the animal. Do not allow people to peek at or touch it.
- Do not try to feed the koala or give it anything to drink.

PROTOCOL FOR DEAD KOALAS

The information on the death of a koala is valuable to record, and samples from these koalas can contribute to research. IKPS will collect dead koalas as well as sick/injured/orphaned. Accurate records can and have made significant impacts and changes to the future conservation and protection of koala habitat. IKPS collects and records data, statistics and produces mapping of koala habitat and populations.

Look for ear tags which may have been placed by wildlife authorities or researchers so they can be notified of the death. Collect all relevant information, where possible, such as location, cause of death, date, sex and age of koala (age can only be determined by looking at teeth – this is done post-mortem).

Samples can be made available for research, where possible. All koalas should be autopsied where cause of death is not positively known. An option that can possibly be utilised is the calling the Moggill Koala Rehabilitation Centre on 0436949954. The Moggill Koala Rehabilitation Centre is involved in ongoing koala research alongside University of Queensland researchers and scientists. Australian Zoo Wildlife Hospital on the Sunshine Coast (1300 369 652) also conducts autopsies.

Always check in the pouch of a dead female Koala for the presence of a joey which may have survived. Call one of the wildlife emergency phone numbers and ask for instructions on what to do. If not able to contact someone, follow the procedure below:

- If the joey is still attached to the teat, do not remove it as you may cause injury to the tiny baby. Get the dead mother and joey to a vet, or carer as soon as possible.
- If the joey is not attached, gently remove it from the pouch and wrap it in a towel or article of clothing and place it somewhere warm, such as under your jumper. (Very young joeys rely on their mother's body heat for warmth.) Alternatively use a warm hot water bottle or a plastic bottle filled with warm water. Use warm, not hot, water and cover the bottle with a jumper or other fabric so that you do not overheat or burn the joey. A backpack lined with soft towels or fabric is a good way to transport the infant.
- Handle the infant as little as possible and do not let other people peek at it or handle it. Remember, these tiny infants can die very easily from stress and noise.
- Do not give the joey anything to drink. Young Koalas need a specialised diet and feeding the wrong formula could cause the infant to die.
- Get the joey to a vet or carer as soon as possible (Contact IKPS as soon as possible.)

RECORD KEEPING

All koalas observed on the property will be recorded. Information to be collected includes date, time, GPS location, type of tree, condition of koala, sex if known and behaviour.

Copies of records will be provided to the Moggill Koala Rehabilitation Centre, State Government database, WildNet, and to the IKPS on a regular basis.

